STANDARDISED 150-TON MOTOR COASTER (Illus.). *See p.* 285.
ANNUAL MEETING OF THE CHAMBER OF SHIPPING. *See p.* 291.

Physical & Applied Sciences

SHIPBUILDING AND SHIPPING RECORD

A JOURNAL OF SHIPBUILDING, MARINE ENGINEERING, DOCKS, HARBOURS AND SHIPPING

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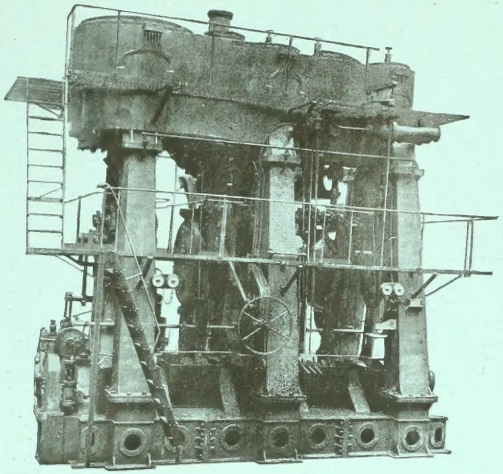

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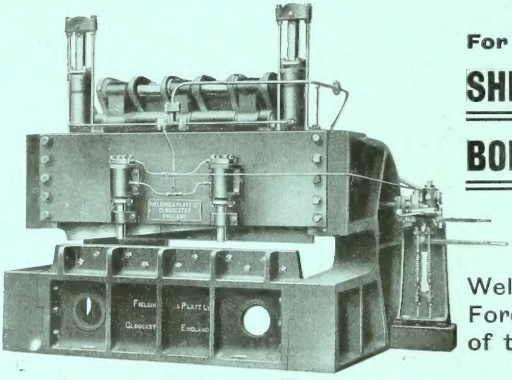

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British Shipping's Future.

THE point made by Sir William Raeburn at last week's meeting of the Chamber of Shipping to the effect that the Government should make a definite statement as to its post-war shipping policy is one which, we think, owners should press. It is all very well—although it does not seem to be much use—to be critical about the war period's control of the industry; but the question which really matters is what is the State's intentions with regard to the future? Sir William Raeburn suggested that the idea is to return as much as possible of the private tonnage to its owners, and use the standard ships for State purposes during the transition from war to peace. But if the war lasts much longer, and the present State control of shipbuilding continues, there will be comparatively few private ships to hand back. The great majority will be standard ships. Is it the State's intention to sell the standard ships it does not require for demobilisation purposes? When does it propose to lift its control of shipbuilding, so that shipowners may order the kind of tonnage they need? Does it propose to do anything to neutralise the effects of its short-sighted financial policy towards the industry? In short, has it a post-war shipping policy at all, or is it merely allowing things to drift? Shipowners deserve to be told.

National Organisation of Docks.

Mr. Balfour Browne, K.C., has been developing his views on the organisation of docks and harbours in the scheme of our national economy. He comes to the conclusion that the whole dock power of the country should be in the hands of a national representative trust. At the moment all sorts of projects for after-war reconstruction are in the air, and the practicability of some would be enhanced if an entirely new fabric were to be built. But the difficulty is that the conditions of the present circumscribe the advance of the future. Some criticisms on the state of our dock organisation which Mr. Balfour Browne makes are valid. In many instances the narrower local views have in the extension of dock accommodation outweighed broader views. In the case of the Humber, the Clyde, the Mersey, and the Port of London, we have seen conscious endeavours to place control in the hands of more broadly-based authorities, and the result has justified those steps. But even these corporations appear to Mr. Balfour Browne to be dominated by too local considerations. The progressive equipment of some continental ports, Hamburg for example before the war, has no doubt its moral, but it has not been lost on our own great dock officials. Some have been very much alive indeed to the need for accommodation for the largest ocean liners. Mr. Balfour Browne turns aside with aversion from State control of docks, but favours a large representation of shipping interests on his national trust.

Mid-Scotland Canal.

Newcastle Chamber of Commerce takes the same line as the Leith Dock Commission in recommending that inquiry should be carefully directed to the commercial prospects of a Mid-Scotland canal before a scheme of construction is adopted. We do not think that there exists much fear that this most important side of the question stands in much danger of being overlooked. Parliamentary sanction must be obtained for the undertaking before it can be started, and any case built up on grounds of commercial advantage would be subjected to searching scrutiny. Unless the Admiralty give support to the project on strategical grounds, then the undertaking would stand or fall on the strength of the detailed case of commercial advantage, which the promoters might bring forward. If it were to attract any considerable volume of mercantile shipping, its rates must be low enough to make it worth while for vessels to forgo the voyage round the north of Scotland. On the other hand, it may be that the Admiralty reviewing strategical considerations in the light of a probable post-war situation will place a high value on the construction of the canal. Much weight would attach to that view. It might even be the deciding factor in a final parliamentary decision. Yet everything is to be gained by keeping the commercial and strategical aspects apart at present. It will make for clearness of view if each is thoroughly explored separately and the balance of advantage and disadvantage in each case explicitly ascertained.

Insuring on Club Terms.

Although the general run of business in the hull insurance market is effected on standard terms such as the Institute Time Clauses and the variations thereof such as the "Free of Particular Average Absolutely" and the "Free of Damage Absolutely" clauses, there are a few owners who find it suits their convenience to insure their vessels with underwriters on the same terms as the policies effected with their mutual clubs. In such cases, a clause is attached to the policy stating that the document shall be deemed identical with the policy issued by the club interested, shall include all the clauses therein and shall follow the club's settlement. Claims, returns, and additional premiums are to be adjusted according to the rules and usages of the club, and any arbitration clause in the Club's rules is to be binding on the insurers and insured. There does not appear to be very much gained by adopting these terms in

place of the Institute Clauses. Perhaps the difference between the two policies from which the owner gains most advantage is in the clause dealing with returns. In the Institute Clauses, returns are collectable on periods of 30 days, and their payment is dependable upon the safe arrival of the vessel. The club terms provide for a daily return of premium, and generally speaking, these are payable whether the vessel be lost or not.

Government War Risk Scheme.

The new scheme for underwriting war risks by the Government office is now established in the premises chosen for it in Cornhill Obviously the outcome of the recent scheme which was abandoned, the main point of the new departure is the distinction made between various voyages with regard to the premium charged. Where, before, a flat rate was charged, now rates assessed by a special committee of underwriters, which sits daily, are the rule. The committee is recruited from the insurance market, and it is understood that some of our most eminent underwriters are giving their services. Thus the Government should be able to conduct its business on terms approximating those current in the open market. In practice it appears that some of the rates are considerably less than those at which risks are freely written at Lloyd's, and in some cases the premiums show anomalies when compared. These will probably become adjusted in time, and with the open market and the Government offering equal attractions, it will remain with the assured or his broker to decide which security is to be taken. In this matter the time taken in settling claims will doubtless prove a factor. Up to the present complaints have been too frequent of the delay of the Government's claims department. The new Claims Settling Bureau will give Lloyd's underwriters a further advantage, while the marine companies have never given cause for complaint under this heading. It is probable, therefore, that with a continuance of the delays in settling losses on the part of the Government Department the bulk of war risk business will go to the market, expedience alone giving the War Risks Office a portion of the business. A reform on the part of the Government Claims Office thus becomes an urgent necessity if the promise of the new departure is to be fulfilled.

The Emigration Problem.

Mr. Walter Long, the Colonial Secretary, is said to have a Bill in preparation with a view to establishing a central emigration authority to control the traffic after the war, the intention being to keep the movement within the Empire, as far as possible. Rightly directed, this measure will, it is hoped, be the means of creating wealth to replace all that has been destroyed during the past few years. As regards continental ideas on the subject, it is by now known that the various European Governments are going to restrict emigration, as every able-bodied human being will be required at home. In fact, all indications point to a great eastward rush from the United States. At all events, the offices of the steamship lines at New York and other ports have been almost inundated with inquiries for passages as soon as peace is declared, the reasons given for this restlessness being (1) a desire to see friends, communication with whom has been interrupted by the war; (2) the quest for family property; and (3) a general expectation that land in Europe will be cheap. The American authorities believe with confidence that, for some time to come, there will be a complete reversal of previous conditions, and that the flow will be eastward, instead of westward. Last year 44,883 steerage passengers were landed at New York, as compared with 104,354 in 1916; 95,467 in 1915; 447,329 in 1914; and 952,834 in 1913. In the circumstances, this progressive decline is not surprising, and it will probably be continued, though, as it were, what the shipping companies "lose on the swings they should make up on the round-abouts," that is, if present estimates are borne out.

The Franco-Brazilian Convention.

Largely as the result of British engineering supervision, all the forty-five German steamers that were seized in Brazilian ports last year when the southern Republic declared war have been fully repaired and made fit for service. Under a convention between France and Brazil, dated December 3, 1917, no fewer than 30 of the vessels, aggregating 153,206 tons gross, have been temporarily ceded to the former country, which has undertaken to pay 110,000,000 francs for their chartering—this vote was sanctioned in the Chamber of Deputies, Paris, a few days ago—to buy 2,000,000 bags of coffee and other native products to the value of 100,000,000 francs, and to employ the ships in at least 40 voyages between Brazil and Europe before March 31 of next year. France has thus secured an important increase in her freight facilities, whilst an important consideration from the Brazilian standpoint is that the vote in question will be placed at the disposal of the Government in Europe. We understand that Germany, through the Dutch Legation at Rio de Janeiro lodged a strong protest against the agreement, and that the reply of the Minister for Foreign Affairs was couched in very precise and energetic language. The remaining 15 vessels, of 75,293 tons, have been placed at the disposal of the Lloyd Brasileiro.

Advance Freight.

A complex aspect of advance freight was presented to the House of Lords in the case of A. Coker & Co., Ltd., *v.* the Limerick Steamship Company, but the solution arrived at seems equitable. Coker & Co. chartered the steamship *Coonagh* belonging to the Limerick Company for a voyage from Liverpool to Archangel. The freight was at the rate of 225s. a ton, but if the cargo was not sufficient to load the vessel to the draught required the charterers were to pay freight on the guaranteed deadweight of 1,950 tons. The charter party contained a clause "Freight to be payable on signing bills of lading in Liverpool in cash before starting," less 3 per cent. on delivery at Archangel. Before the loading was complete the *Coonagh* took fire and sunk in dock. The voyage was treated as abandoned. At the time of the accident about 1,430 tons of cargo were on board and 94 tons were awaiting loading and bills of lading had not been signed on the unloaded portion. The House of Lords rejected the contention that freight was not payable until all the bills of lading had been signed. They considered that the cargo provided only amounting to 1,524 tons freight should be based on guaranteed deadweight with a deduction on account of the 94 tons awaiting shipment. The freight payable on 1,950 tons at 225s. less 3 per cent. is £21,279. But as the cargo provided only amounted to 1,524 tons this in reality works out at a rate of 279s. 3d. a ton, and it was at the latter rate and not at 225s. that they computed a deduction of £1,312 on account of the unshipped goods. This method of computation is particularly worthy of note.

The Wages Awards.

That the rank and file of the engineering and shipbuilding industries are not very well pleased with the latest wages award of the Committee on Production goes almost without saying. The finding of the Committee is in effect that the conditions prevailing at present do not warrant any alteration. For a variety of reasons the general public—out of whose pockets it has to be borne in mind all these war advances come—are unlikely to dissent from the decision. Since the outbreak of hostilities they have not been ungenerous in their attitude towards the demands of the workers for increases of wages "to meet the dearer cost of living." The 12½ per cent. and 7½ per cent. muddles have, however, opened their eyes to the real position, and they are beginning to ask, as Mr. A. M. Smith asked at the hearing of the engineering application, where the increases are to end. The men admittedly seem to have reason on their side when they put in Board of Trade figures relating to the

increase in the prices of food and other necessaries. But, as Sir George Carter pointed out, in controverting the arguments of the shipyard unions, these statistics are not altogether convincing. If the men and their representatives insist that they are, and thereby bring about a recurrence of "unrest," the Government's course is clear. It must appoint a committee to go into the whole matter, and ascertain the exact trouble.

Facts for Workers.

The view is taken in responsible quarters that if the men in the shipyards were aware of the gravity of the tonnage position they would need no exhortation to put their backs into their work. The difficulty appears to be to convey the necessary exact information about tonnage lost and tonnage completed without giving valuable information to the enemy. It must be common knowledge, even in enemy countries, that we are losing more ships than we are building, for official statements to that general effect have been made recently in Parliament. Is there any need to be more explicit than that about our losses in the effort to induce the workers to increase their output? We do not believe there is. It seems to us that all it is necessary to do in order to stimulate their activity is to permit of the publication as in pre-war days of local shipbuilding returns showing in gross tons the output of each important district. It would not matter whether the figures related to tonnage launched or to tonnage completed. And, of course, only mercantile ships would be allowed into the reckoning. If such returns were published, rivalry between districts would be developed with, there is no doubt, the most beneficial effect on output. If the Admiralty fear that even this limited information would be useful to the enemy they can omit minor districts and leave the Germans to "estimate" their output.

A Torpedo-Proof Ship.

The German submarine blockade has led to the invention of many types of vessel which claim to be safe from the attack of torpedo, or else if torpedoed claim to be able to keep afloat even when damaged to an extent which would sink a vessel constructed in the usual way. To this latter class belongs the *Lucia*, which has been fitted out by the Committee of Inventions of the American Naval Consulting Board, of which Mr. Edison is president. The *Lucia* is equipped with honeycomb airtight boxes which the Committee of Inventions asserts will keep her afloat even after she has received a direct hit from a torpedo, such as would sink an ordinary ship in a few minutes. Tests are now being carried out by the American Naval Board with this unsinkable torpedo-proof ship at Norfolk, Virginia, and it is sought to establish whether by sacrificing 14 per cent. of cargo carrying space and from two to three knots speed, a vessel can be made virtually unsinkable. The Naval Board will inspect the ship, load her, and send her across the Atlantic without convoy, but with an armed guard to prevent the crew of a submarine from boarding her and destroying the vessel by dynamite or fire. According to the Washington *Post*, experts seem generally agreed that the *Lucia*, which was fitted with its "buoyancy boxes" at a cost of £30,000, is virtually immune from being sunk by submarine attack, but they are by no means unanimous as to the expediency of adopting the device.

Germany and Shipbuilding Activity.

"Nauticus," in *Hansa*, professes great solicitude for the shipyards of Britain, the United States and Japan which, he imagines, will find little to occupy them a few years after the war. This cheerful prognostication is based upon figures given by Allan Boo in *Tidskrift för Skeppsbyggnadskonst*. Boo estimates that the present total merchant tonnage in the world is 40 million tons (gross), compared with 49 million tons before the war and a probable present tonnage of 55 million tons had there been no war. Allowing for 2,000,000 tons lost by ordinary casualties, wrecks, &c., we are 17,000,000 tons below the tonnage which would have been available but for the war. The present output of the world's yards is estimated at twice the figure for 1913, say 6,600,000 tons per annum. Assuming $2\frac{1}{2}$ per cent. loss of tonnage per annum after the war, and allowing for 3·4 per cent. normal increase per annum, we are left with a net output of 3·8 million tons per annum to make good war losses. Shortage of materials will involve some initial delay, but the whole 17,000,000 tons present deficit and the losses and normal increase of the recovery period should be caught up within six years. Thereafter, says Nauticus, the total annual demand for new tonnage will not exceed 3 or $3\frac{1}{2}$ million per annum, *i.e.*, half the world's shipbuilding capacity will be idle. German yards, however, are not to be in this half. There are no "grounds for uneasiness" either in Germany or in those neutral countries which did not supply all their own shipping needs before the war. "Only a complete defeat of Germany could bring catastrophe to our shipbuilding industry and fulfil the hopes of those countries (Britain, U.S.A. and Japan)." Nauticus' views are not likely to deter us from developing our mercantile building capacity to the utmost for a very definite and immediate purpose. That accomplished, future problems will be quite capable of solution; if we fail now, there will be no future for us.

The Isherwood Unsinkable Ship.

In various journals the plans have appeared of an unsinkable ship, designed by Mr. Isherwood. The accuracy of the draught lines after bilging, which are there shown, have been questioned by some, and the writer of this note has also doubted these. On examination, however, calculation shows that these are substantially correct, provided a permeability of 40 per cent. is assumed in the cargo holds. Now the Bulkhead Committee accepted a standard of 60 per cent. permeability, and that as the result of experiment and experience. Were Isherwood's vessel laden with coal right up to the watertight deck it would be probably quite safe to assume only 40 per cent. permeability as that standard was the one adopted by the former Bulkhead Committee. It may be argued that it is not perfectly honest to assume this lower μ-value after the higher standard set by the latest Committee, in order to show to advantage the proposed system of subdivision; on the other hand, although 60 per cent. μ has been adopted by that Committee, this does not alter the fact that if a hold is fully laden with coal, 40 per cent. μ is the proper value to take. Apart from these considerations the proposals submitted by Isherwood seem to be perfectly sound. A closer transverse sub-division in cargo ships is most desirable if they are to afford much chance of surviving a submarine attack. The great freeboard suggested, in conjunction with the watertight deck, should give a large measure of safety to the vessel. It seems quite reasonable to argue that it would be of infinite advantage to spend a little more time and material on the construction of ships and have them survive attack, rather than that they should be built rapidly and sent to sea with little hope of floating should they be torpedoed.

Natural Oil in Great Britain.

It has long been known that natural oil exists in a free state beneath the soil in various parts of these islands, but it has been a moot point whether it could be found in sufficiently large quantities to render the working of it a commercially sound proposition. These doubts, may, however, be considered as having been set at rest by an authoritative statement made by Mr. Herbert Samuel last week on this subject, in which he said that a firm with probably as large or even a larger expert knowledge than any other in the world had advised, and that very distinguished geologists were convinced that there were large deposits

of petroleum within these islands. Lord Cowdray, the head of the firm referred to, has since stated that extensive studies carried out by his scientific staff during the last three and a half years have led him to the conclusion that the possibilities of securing a commercial production of oil in Great Britain are of a distinctly promising nature, and that from time to time he has advised the Admiralty to that effect. He further stated that subject to the passing of the necessary Act to safeguard the industry his firm have made alternative offers, which are still open for the period of the war; to place at the disposal of the Government free of all cost their services and geological staff for the purposes of exploration and development; or, should the Government not desire to risk public money on what must be deemed a speculative enterprise, to drill at their own expense, subject to certain areas being reserved to them. He added that this offer committed the firm to a probable expenditure of £500,000.

THE SHIPBUILDING AGITATION.

So much is being said and written on the shipbuilding position that the main points are in danger of being overlooked, and the recriminations of the last few weeks, which became more publicly expressed during and after the First Lord of the Admiralty's speech on Tuesday last week, are tending to obscure the outstanding difficulties which, it should be observed, are of deeper origin than the present spontaneous outburst.

The issues are perfectly clear. The public has been fed upon soft promises and glowing estimates of a shipbuilding programme which would counterbalance our losses by submarines. Although somewhat disappointed when the Chancellor of the Exchequer showed that the Prime Minister's estimate was not reached, the public took the news nonchalantly. It is wonderful how a handful of statistics thrown to the winds with but little coherence will satisfy—or confuse—the man in the street, and so for the sake of conciseness we have gathered a few, pertinent to the present question, and set them out below.

	Tons gross.
Mr. Lloyd George, on August 16, 1917, said we had actually built during the first 6 months of 1917	484,000
He hoped to build during the second 6 months ...	1,100,000
Making a total for 1917 of	1,584,000
Mr. Bonar Law said on February 14, 1918, that the output was	1,163,474
Leaving a deficit of	420,526

It will be seen therefore that the Prime Minister, the Government or their advisers—whoever you will—were wrong and that they were seriously wrong. They were 38 per cent. below their estimated output. They were also out of their estimates of the purchase of tonnage from abroad; but as this is another story we will pass it by. We will also leave aside the beggarly output of standard ships. Sir John Ellerman's remarks at the Chamber of Shipping meeting need no elaboration.

The public, as we have already said, took this shipbuilding deficit calmly. The pill was gilded. It was only when it became known that our total output for January last was 58,000 tons, at the rate of, say, 700,000 tons a year, or, as it dawned upon the man in the street's intelligence, something like a bad week's sinkings, that the alarmist attitude and the recriminative faculty became pronounced.

Sir Eric Geddes last week threw the blame on labour and on the shipbuilders. It would only have been just and not in the least generous to have mentioned another factor, and that is the lack of sympathetic and expert handling of the situation by the Government and particularly the Admiralty Controller's Department which is, we take it, primarily responsible. There would then have been hitting all round, and although differences of opinion might arise as to the correct apportionment of the blame, those who know anything of the situation would have felt that rough justice would have been meted out. There would then have been less need for the porcupine attitude of shipbuilders, shipowners and labour. As it is, their respective federations or associations feel that the time has come to put the other side of the question forward and the whole Press is agog with specious processes, mostly ill-digested, for overcoming the difficulty. Sir Eric spoke of "war weariness" among some employers. But why is there what he terms "war weariness" on the part of employers? An employer may not be weary of the war, but he may be sick and tired of petty interferences which do nothing but delay work and undermine authority. Seemingly trivial and unnecessary alterations strike at the very root of successful standardisation, and are particularly galling to the men who have brought British shipbuilding to the pre-eminent position it holds. A sympathetic handling of the situation by the Controller's Department would help a great deal. We deal with the labour problem in the following article.

A WAR LABOUR DEPARTMENT.

A curious feature of the controversy which is in progress about the falling off in the United Kingdom's output of new merchant ships is that the public who are invited to be most concerned about it know least about its causes. The First Lord ascribes the blame for it partly to employers but largely to the workers An official statement issued jointly by the Shipbuilding Employers' Federation and the Shipyard Trade Unions suggests that there are, at any rate, two sides to that question. Obviously, their opinion is that the State's control of the industry is to blame, but for knowledge as to whether the defect of the control is in the organisation of the Deputy Controller of Auxiliary Shipbuilding Department, the Shipyard Labour Department, or the Ministry of Munitions, the public must await the issue of the fuller statement on the subject which is promised.

Meanwhile the gravity of the tonnage position does not diminish, and the public are honestly anxious about it. Nobody—we are thinking of the people whose knowledge of the industry's war period organisation is not intimate—believes that the causes of the trouble can be baffling in their obscurity, or that when found they will be irremovable. It is, the great majority say, a simple question of fact. Is the delay in the shipyards, they ask, or is it in the engine or boiler or auxiliary shops? Is the trouble lack of material, or are labour supplies inadequate? From whichever of these sources it arises the trouble is curable; and it will have to be cured without delay if we are not to lose the war.

Rightly or wrongly the average man is, it may be pointed out, beginning to be of the opinion that for a great many, if not all, of its failures, the State's control of industry is itself to blame. In its organisation there is an undesirable degree of overlapping. Take, for example, its organisation of labour, which is presumed, we may say, to have something to do with the tonnage crisis. That the State needs labour for a great variety of purposes everybody knows or ought to know. One or two departments are directly and indirectly large employers, and in order to find the necessary workers they maintain supply sections.

In principle a Labour Supply Bureau is good, especially where large numbers are employed. It has been applied by several firms in the United States—notably by the Fore River Corporation—and its results to date have been so satisfactory that developments of it are practically certain. The conditions under which it has proved most efficient are, however, totally different from those which, for the time being, prevail in the United Kingdom. Our labour market is not, strictly speaking, free; on the contrary, the whole of Great Britain's labour is at present voluntarily on national service, and assumes that it is being employed to the best advantage in the interest of the community. Nominally it is, but actually it is not.

The Labour Supply Sections of the State Departments which are large employers are, in effect, rivals. They do not merely state their requirements, but—small blame to them—insist on their fulfilment without regard to the effect on other national interests. They frequently overlap the organisation of the Ministry of National Service and also—one of them did, at any rate, with disastrous results not long ago—that of the Ministry of Labour. The effect, as it is visible in shipbuilding and engineering—about which we are naturally most concerned—is that we have four State Departments dealing with Labour, namely, the Admiralty, the Ministry of Munitions, the Ministry of Labour, and the Ministry of National Service. It is not definitely assumed that overlapping is the cause of the mercantile tonnage crisis, but there is no gainsaying, we think, that it is a highly inefficient arrangement.

The opinion of the man in the street is that with everybody, voluntarily or compulsorily, on national service the whole of the war period's labour should be under one department. To this department the other departments could state their requirements and be content with the allotments made. So many State organisations of one kind and another already exist that proposals to add to their number are perhaps deservedly unpopular. But this addition would simplify matters, and it might, if the direction were in capable hands, have the effect of greatly expediting the construction of much-needed merchant ships.

WATER COOLING OF DIESEL ENGINES.

ONE of the most important details which has to be considered in the design of Diesel engines is the water cooling of the various parts where the heat generated may be sufficiently great to cause trouble if not conducted away with sufficient rapidity. By analogy with the marine reciprocating steam engine, and considering what may be termed the standard type of Diesel engine having cylinders supported upon columns which act as guides for an external crosshead, we find that water cooling is applied to just those parts to which it is applied on the steam engine, viz., the thrust bearing, the ahead crosshead guides which always have the cold water circulating around them when the engine is running, and also to the main bearings above which a spray pipe is fitted for use in case one of them runs hot. There is, however, one essential difference between the reciprocating steam engine and the reciprocating internal-combustion engine, for whereas in the former it is necessary to take steps to prevent the conduction of heat from the cylinders, by the provision of a cylinder lagging of some non-conducting material such as asbestos or wood shavings, in the latter, it is essential that the most efficient means be adopted for conducting a large proportion of the heat away from the cylinders so that the temperature of the cylinder walls and of the piston is kept sufficiently low not only to ensure efficient lubrication of the piston within the cylinder, but also to prevent the setting up of undue stresses consequent upon the unequal expansion caused by the enormously high temperatures reached during combustion which have varying effects in different parts of the cylinder casting. So important is this question of cylinder cooling that it may be asserted that one of the greatest obstacles to the development of the internal-combustion engine is the difficulty of producing an efficient cylinder casting which can withstand, without fear of distortion or cracking, the enormous stresses caused by the different temperatures to which its various parts are subjected. It is essential, therefore, that in addition to those details already enumerated, the cylinder covers and the pistons shall be efficiently water cooled.

The water-cooling of the various stationary parts of the engine presents but little difficulty. For the thrust block and the crosshead guide, the method adopted is similar to that in use on reciprocating marine engines. A circulating water service is fitted, usually supplied from a tank mounted high up in the engine room, which itself is supplied from a water circulating pump. The cylinder jackets are usually formed by the fixing of the cylinder liners between flanges at the top and bottom of the cylinder casting, this method having the advantage of permitting the cylinder liner to expand freely and also rendering the renewal of cylinder liners a comparatively easy matter. The cylinder covers, which usually contain the valve pockets, are cast hollow and the water circulated through the cored space, care being taken that the incoming water is brought in contact with the lower surface of the cylinder cover, and also that it keeps the seating of the fuel valve and the scavenging valves efficiently cooled. In the two-stroke engine there is no exhaust valve, and since the exhaust gases are cooled to a large extent by the scavenging air, it is not usual to cool the exhaust pipes except at those points where expansion joints are fitted. With the four-stroke engine, an exhaust valve is required, and this has to be water cooled, for since the scavenging air does not play so important a part in the cycle of operations, the tendency is for the exhaust gases to be hotter.

The water cooling of the piston offers considerable difficulty owing to the fact that the water has to be led to and from a moving piece of mechanism. When rigid piston rods are employed with external crossheads, as is the usual practice for all large Diesels, two channels are formed in the piston rod which register with holes in the piston on the piston seating. These channels are sometimes concentric, being formed by a tube fixed inside the hollow piston rod, and sometimes of the same size and running side by side in the piston rod. The piston itself is hollow, and to facilitate cleaning the piston heads are removable, being bolted to a flange on the top of the piston rod, the bolts being easily reached when the trunk of the piston is lowered. There are two methods in vogue for supplying cold water to and leading the warmed water from the piston rod, one in which two pipes having flexible ball joints at each end are connected between the water service pipe running alongside the columns and the piston rod, and the other in which an extension of the outlet pipe secured vertically on to one of the crosshead shoes forms the plunger of a small pump. At the bottom of this pipe there is a non-return valve, so that on the downward stroke the column of water in the pump cylinder opens the valve and forces the pipeful of water upward, while on the return stroke the valve closes and the pipeful is lifted. Of the two systems, the first is to be recommended on the score of simplicity, but for engines with a long piston stroke the wear on the ball joints tends to become excessive with the result that they soon become leaky, and it is always a difficult matter to keep them tight, so that for large powered Diesel engines the second system appears to find most favour.

Finally, it should be mentioned that consequent upon the high temperatures in the cylinder and piston, it has been found that the use of sea water for circulating purposes leads to the deposition of a hard non-conducting scale on the inner surfaces of the jackets which lowers their efficiency to a very large extent. For a while, therefore, fresh water was used, but this was obviously a clumsy expedient for use at sea, necessitating storage tanks for cooling purposes, and hence the more modern types of engine use sea water for circulating through cylinder and piston, care being taken that sufficient water is circulated to prevent an excessive rise of temperature and at the same time all parts of the jackets are made readily accessible so that they may be cleaned should occasion arise.

PUBLICATIONS RECEIVED.

[A short notice of any publication does not necessarily preclude the subsequent appearance of a longer review.]

Steam Turbines. A practical and theoretical treatise for engineers and students. By James Ambrose Moyer, S.B., A.M. London: Chapman & Hall, Ltd., 11, Henrietta Street, Covent Garden, W.C.2. New York: John Wiley & Sons, Inc. 6 in. × 9¼ in. × 1¼ in. 468 pages. Cloth, 16s. 6d. net.

It was not so very many years ago that the engineer was bewailing the fact that there were so few text-books available on the subject

of steam turbines. The position is now reversed, and the reviewer finds volumes bearing this title being placed before him with almost disconcerting frequency, and the engineer is in a difficulty to decide just what book is best suited for his purpose. The book under review, which hails from the United States, has reached a third edition, which must be taken as an indication of the excellent all-round qualities of the book, and a perusal of its pages confirms that view. There is such an even balance held between theory and practice that the student does not lose interest by the way, and the numerous numerical exercises tend further to hold his interest.

There are two or three chapters which will appeal more particularly to the engineer in charge of the running and maintenance of steam turbines, such as "Method of correcting steam turbine tests," "steam turbine economies," which will be found a source of information leading towards the best methods of handling these machines, and a chapter on "Gas Turbines" will be of value to the inventor whose hopes are centered upon the improvement of this desirable type of engine. The book has but little peculiar value for the marine engineer. The author announces in the preface to the third edition that the future lays with the large turbine, instancing the fact that steam turbine units to generate 70,000 k.w. are now a reality, and yet, in his chapter on marine turbines, he has made little or no reference to the details of the electric propulsion of ships, wherein large economical units could so profitably be employed, and a description of the Ljungstrom turbine, which is of such exceptional interest to the marine engineer, is entirely lacking. Notwithstanding these shortcomings, the book may be recommended to all students and engineers who are desirous of becoming thoroughly conversant with the theory and practice of steam-turbine design and management. The study of the American point of view will form an excellent supplement to the knowledge given in English text-books.

TRADE PUBLICATIONS.

[Copies of any of the publications mentioned in this section will be sent on application to the firms by which they are issued.]

Concrete Ships: A Possible Solution of the Shipping Problem.—The Portland Cement Association of America issue a booklet in which they have brought together illustrated descriptions of the various types of concrete vessels built and building in all parts of the world. In addition, the various advantages of reinforced concrete for the construction of small vessels are set forth, and extracts from the press—both technical and popular—eulogising this method of ship construction are given. While the construction of large ocean-going concrete steamers is not advocated, attention is drawn to a vessel of 4,500 tons now under construction in the States, which is to be used for the trans-Pacific service, and it is urged that the use of reinforced concrete, especially for small craft and lake steamers, presents a possible solution of the shipping problem. The booklet, which consists of 48 pages, is issued from the offices of the Portland Cement Association, 111, West Washington Street, Chicago.

LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by Correspondents.]

SOME INSUFFICIENTLY CONSIDERED DETAILS OF SHIP CONSTRUCTION AND EQUIPMENT.

Elizabeth, N.J.,
February 22, 1918.

To the Editor of Shipbuilding and Shipping Record.

I read with considerable interest the article in your paper of January 3, entitled "Some insufficiently considered details of ship construction and equipment," by C. Waldie Cairns, M.Sc., and I have also read the discussion on the paper.

It is not my intention to invade the right of discussion which belongs to the members of the North-East Coast Institution of Shipbuilders, but I do desire, as a general reader, to call special attention to one phase of this paper, which is not referred to in the discussion, that is, Mr. Cairns' facility of technical expression. It is most excellent, because there is a great deal of small, uncommon detail, and he expresses himself true to the line every time.

I do not believe I have read such a continuously correct expression of technical terms in shipping description since I read "Falconer's Shipwreck," many years ago, reference to which work I think will make my meaning more distinct. We have all laughed over "Pull on the up-rope; Pull on the down-rope," and I for one rejoice to read an article brimming with technicalities so truly expressed in technical terms.

SAMUEL HOLMES.

THE OUTLOOK FOR GERMAN OWNERS.

Ever since the passage of the German Reconstruction Bill, *Hansa* has lost no opportunity of emphasising that this measure does by no means represent a free gift of millions to shipowners, but that, on the contrary, owners receive less direct benefit from it than any other section of the shipping industry. Whilst there is a lack of concord between this view and the anxiety which the same journal displayed when the fate of the Bill was still undecided, there is undoubtedly some truth in its present arguments and a corresponding measure of comfort for those who will have to compete with German owners later on.

The Reconstruction Act indemnifies for loss of property and wages those German seamen who have been interned in neutral ports. Owners are left, however, to deal with the wage problem (but not loss of property) so far as concerns men interned in enemy countries. How now does this compare with the position of owners themselves? The law gives them no indemnity for loss of profits on interned vessels, but consigns them to the provisions of whatever general indemnity measure may be attached to or derived from the conditions of peace.

Equally unfavourable to owners is a comparison between them and shipbuilders. Where a vessel has been lost, the law grants to the owner a percentage of the excess over the "peace building price," viz., 50 to 70 per cent. of the extra building cost during the period of one to four years after the war; or 20 to 55 per cent. of the extra building cost if the replacement vessel is not ready until the period five to nine years after the war. Variations in price with size, type and age of vessels are left to be settled for each case individually.

Leaving special-purpose vessels out of consideration, £9 6s. per ton d.w. may be taken as a reasonable average for the building price of ordinary vessels under peace conditions. How prices will rule after the war can only be conjectured, but it is unlikely, says *Hansa*, that ordinary vessels will be obtainable for less than £27 per ton d.w. during the first four years after the war, or for less than £19 12s. per ton d.w. during the first nine years after the war. In the respective cases the owner will receive on the average 60 per cent. of the excess cost (*i.e.*, £10 12s. per ton) or 30 per cent. of the excess cost (*i.e.*, £3 2s.) over and above the peace price of £9 6s. per ton d.w. *less* depreciation, which will sometimes be considerable. Apart from this question of depreciation, the owner will receive only £19 18s., or £12 18s. per ton compared with the £27 or £19 12s. per ton which he will have to pay for the replacement vessels.

In the aggregate, German owners will have to provide very large sums from their own resources, or rather, on their own responsibility. Reserve funds are depleted by the war, and insurances, where they have been recovered, are either inadequate to meet present conditions or have been already expended. Recourse will therefore be made to loans, the cost of which will be considerable for years to come. This would not matter if owners were able to take advantage of the high freights current after the war, but, as a matter of fact, it will be years before most of the replacement vessels become available.

"The Reconstruction Act is of direct benefit to shipyards, to the coal and iron industries, to innumerable industries affiliated to shipbuilding, and to the workpeople in all these industries, but," says *Hansa*, "it benefits shipowners only if freights remain high long enough for the replacement vessels to recoup their abnormal cost."

THE DECREASED SHIPBUILDING OUTPUT.

The First Lord's Statement.

In the course of his statement in the House of Commons on Tuesday of last week the First Lord of the Admiralty (Sir Eric Geddes) said that the difficulties which had dogged us during the first, second and third quarters of last year, in connection with material, had been overcome, and that we had material and that shipbuilding was in a fair way to improvement. He still held that view. A diagram of the United Kingdom shipbuilding was published in January last which demonstrated the upward trend of shipbuilding during the fourth quarter of 1917. There was no lack of material in the yards to-day. There were more men, and increasing numbers of men in the yards. But whereas the average monthly output of merchant shipbuilding in the fourth quarter of 1917 was roughly 140,000 tons, it only reached 58,000 tons in January. It should have been very much larger. It is true that the weather was exceptionally bad, and delays were caused thereby, also that January, due to holidays, was always in peace-time a very bad month for output of ships ; we could not take one week or month by itself, be it good or bad. He thought that February was going to be better, nearly twice the output of January when the figures were complete ; but still only about two-thirds of what the same yards, and fewer men, had done in a month. The number of vessels lodged and outfitting was higher than usual, and those ships would be in service shortly.

Alleged Lack of Endeavour.

The main fact which was brought out by reports, not only from employers ,but from representatives of men, and representatives of departments, was that whether due to labour unrest, strikes, or difficulties of whatever kinds, the men in the yards were not working as if the life of the country depended upon their exertions, nor were they working even as they did in the fourth quarter of last year. Employers also were not perhaps in all cases doing all that could be done to increase output. The long strain of the war must have its effect on the nerves of some of them, as it had on everyone else. He would not like to suggest that the vast majority both of employers and of men were not actuated by the call of patriotism ; but the serious unrest which existed in January would have its effect on the completions in later months, and the January drop could not be fully accounted for otherwise than that it was caused by unrest in its widest interpretation. He was driven to the conclusion that even at this late date the situation was not fully realised.

3,000,000 Tons a Year Possible.

The production of merchant ships in the United Kingdom during January, 1918, even making the most generous allowance for weather difficulties, fell so far below the average per month in the preceding quarter that if improvement were not speedily made the point where production balances losses would be postponed to a dangerous extent, and even when that point was reached we should still have to make good the accumulation of losses for the past. During the critical period that confronts us we must rely in the main upon our own ships and ourselves. Our Allies are making every effort to increase the production of ships, but in spite of the glowing reports of representatives of the Press in the United States, and great, doubtless, as the effort of that country is, there is no doubt, and it is not questioned in official circles in America, that a considerable time must elapse before the desired output will be secured. He would like to add that the Canadian Government were prosecuting their shipbuilding programme with the utmost vigour and would fill berths as they became vacant at existing yards. To reach an ultimate production at the rate of 3,000,000 tons per annum was, he believed, well within the present and prospective capacity of our shipbuilding yards and engineering shops, but he wished to make it perfectly clear that those results could not be obtained unless maximum output were given in every shipyard and marine engine shop by everyone concerned. If employers hesitate to play their part, or if men anywhere down tools, or go slow for any reason, they would now do so in the knowledge of the grevious extent to which they prejudice the vital interests of the community. The Board of Admiralty had hoped that before the end of the second quarter of 1918 output of world tonnage would have been overtaken and passed destruction by the enemy. That was still possible, but it could only be obtained if we all pulled together. He was confident that when the position was fully realised, people of all classes would take the matter seriously to heart and do everything possible to improve it. They were therefore arranging to bring home to the employers and workers in every yard, and to all classes who could affect the issue, the tonnage output figures of the United Kingdom from time to time, and to publish output tonnage not only in this country as a whole, but district by district.

Employers and Labour.

In connection with the First Lord's statement a joint session of the Shipbuilding Employers' Federation and the shipyard trade unions was held and a review of the position was issued on Tuesday.

This statement reviewed the negotiations commenced on November 4 on the question of man power, and cited the deputation on November 22, 1917, of employers' and workmen's representatives, which was received by the Prime Minister (who was accompanied by the First Lord of the Admiralty and other Ministers). The deputation impressed upon the Prime Minister the difficulties created in the industry by the multiplicity of Government authorities with whom they had to deal, and suggested :—

(1) That craftsmen and others experienced in shipyard work now serving with the Colours should be returned to shipyards.

(2) That the Ministry of National Service alone should be responsible for supply, distribution, and utilization of labour in shipyards, and that a joint committee of employers' and workmen's representatives should be set up to guide that department upon—and work out the practical details of—schemes for making full use of labour and for placing additional labour in shipyards.

(3) That the Ministry of Labour alone should be responsible for the administration of all other matters affecting labour, and that the joint committee of employers' and workmen's representatives should assist the Ministry of Labour by influencing the direct settlement between employers and workpeople of all disputes and differences arising between them, and generally advising the Ministry of Labour on matters connected with the policy or administration of labour questions.

The subsequent negotiations were reviewed and the statement concludes : "It is impossible to believe that the First Lord could have had these negotiations in mind when he made his speech on the Navy Estimates. In the opinion of the employers and the trade unions these negotiations reveal a realisation on their part of the seriousness of the situation, and not only a willingness to help, but an anxiety to help. The spirit which they showed in November still animates both sides. They believe that many of those difficulties which have within the last few months disturbed

output might have been avoided or more speedily solved had the organisation they originally suggested been adopted, and they urge that the Government should without further delay reconsider the position. They are, in any event, prepared to give to the Government their loyal support and active co-operation in any steps which will have the effect of securing to the nation the fullest possible output of ships."

Further changes in the duties and control of shipbuilding by the Admiralty Controller's staff were outlined by Dr. Macnamara on Tuesday. These will be found under "Questions in Parliament" on page 300.

SHIPOWNERS' PROVISION POOL.

The following is the text of a letter, sent by Mr. T. G. Jones, Director of Ships' Stores, to Mr. W. G. de Gruchy, Hon. Secretary of the London Shipowners' Provision Pool, which says :—

"You may remember some time ago the American Board placed a restriction upon ships bringing over foodstuffs other than what they were actually likely to consume on board their own ships.

"I am pleased to inform you that the United States Food Administration has approved of our scheme and arrangements have been officially made for all ships to bring back as much foodstuffs as possible for the express purpose of placing same in the provision pools working with the authority of this Ministry. This will be done by a licence for surplus ships' stores which will be granted by Sir Connop Guthrie, Room 401, 165, Broadway, New York, who is the British Controller of the Allied Provision Committee of America. This licence will be granted to captains and owners on the conditions named above.

"Will you please make this generally known so that owners and captains may obtain permits for surplus ships' stores to their maximum capacity."

Arrangement at the Various Ports.

The following is the text of a circular issued by the Shipowners' Provision Pool with regard to the pooling of ships' stores :—

"The Ministry of Food called a conference of shipowners on December 18, 1917, when the following proposal was submitted and adopted by the conference :—

"'That every steamer, wherever trading and coming to the United Kingdom, should purchase abroad, not only sufficient foodstuffs for her voyage home and out again, but also to fill all available store accommodation, including state-rooms where practicable, with the foodstuffs that are available.'

"A committee was elected to develop the scheme and all shipowners have been invited to join in a provision pool for the furtherance of the above object.

"It has been agreed that all steamers trading abroad (excluding France and Italy) shall bring home ship's provisions in as large a quantity as possible regardless of the steamer's own requirements for the voyage, preference to be given to buying in the country of origin, but in any event filling all available space ; it being understood that such provisions purchased shall be of a quality as shall pass Board of Trade Survey, and that broken bulk and perishable goods such as eggs and fruit shall not be handed to the pool.

"On steamer's arrival in the United Kingdom all surplus provisions not required by the shipowner shall be handed over to the agent of the Shipowners' Provision Pool, the shipowner receiving payment for same at cost price plus 10 per cent. which is to cover war risk insurance and other expenses.

"These surplus provisions will be available for shipowners to purchase for the requirements of their outgoing steamers and will be invoiced at prices fixed by the committee. These prices will be based on the average cost to the pool, plus 11¼ per cent. paid to the agent for handling, warehousing, financing, receiving and delivering, plus a further 5 per cent. on the resulting sum to be retained by the pool to meet contingencies.

"Shipowners are requested to instruct their superintendents to obtain provisions for their outgoing steamers as far as possible from the stocks held by the Pool, either applying directly to the agents of the Pool, or through their usual ship's store dealer.

Agents at the Ports.

"The following is a list of agents appointed by the Pool, from whom information can be obtained as to the stocks held at each port, and to whom likely requirements should be advised :—

"Cardiff (including Bristol Channel, except Avonmouth), Mr. J. S. Frazer (Chairman, Cardiff & Bristol Channel Ships' Store Merchants' Association), Britannia Buildings, Bute Docks ; Avonmouth, Bell Brothers & Thomson. Glasgow, Mr. R. S. Gilmour, Hon. Secretary, Glasgow Ships' Store Merchants' Association, 22, Oswald Street. Hull, Mr. William Rippon, 25, Market Place. Liverpool (including Birkenhead), Mr. John Burnyeat, Hon. Secretary, Liverpool Ships' Store Dealers' Association, 50, South Castle Street. London (including Tilbury), Kearley & Tonge, Ltd., Mitre Square. Middlesbrough, The Mercantile Stores, Ltd., The Docks. Southampton, Bell Bros. & Thomson, Albert Road. Tyne (including Blyth and Wear), Mr. Anthony Fraser, Hon. Secretary, the North-East Coast Ships' Store Dealers' Association, 25, Queen Street, Newcastle-on-Tyne,

"Arrangements have been made with the English Coaling Company at Port Said to receive and issue provisions on the same terms as United Kingdom ports.

"It is suggested that the following instructions be given to owners' superintendents :—

"1. On steamer's arrival surplus provisions to be handed over to the Pool's agent at port of discharge free from ship's rail. Full particulars for Customs purposes to be given to the agent as to the number and contents of packages, gross and net weights and values and port of shipment.

"2. Receipts for stores delivered by steamers to the agent of the Pool will be prepared in triplicate by the agent. The original and duplicate of the receipt will in due course be sent to the shipowner who, on agreeing same, will present his account to the pool office, accompanied by the original purchase invoices. The pool office will then pass the accounts on to the agent for payment.

"3. Provisions supplied to steamers will be accompanied by a delivery order in triplicate, upon which a receipt must be given in triplicate and signed by the master, chief steward or shore superintendent, one part together with invoice will then be forwarded to the owners with a request for a cheque in favour of the agent."

Shipbuilding in India.

In a recent issue of the *Times of India* the following reference was given with regard to shipbuilding in India :—

"In connection with the announcement made by the *Pioneer* regarding the institution of a shipbuilding branch of the Indian Munitions Board, inquiries made in Calcutta elicited the information that the report is true. Colonel McGregor, of the Admiralty Construction Branch, is coming out to inquire into the prospects of shipbuilding in Calcutta and other Indian ports and to discover how the labour problem in this country can be dealt with and what the needs are as regards material. Calcutta shipbuilders are quite enthusiastic about the new scheme and are making all arrangements to provide every item of information for the Admiralty's representative. Some of them said that the great handicap was that of getting shipments of material needed for construction.

"The question of the formation of a shipbuilding branch of the Indian Munitions Board is arousing a great deal of interest in Calcutta and the main difficulty that exists at present in constructing steel built vessels is the famine of steel plates in India. There is no business concern in India that possesses adequate machinery for the rolling of large steel plates for shipbuilding. It is, therefore, presumed in shipping quarters here that the early energies of the construction branch in India will be almost solely devoted to the making of barges and small craft for the campaign in Mesopotamia and for turning out wooden coasting ships to replace some of the steel vessels in that trade."

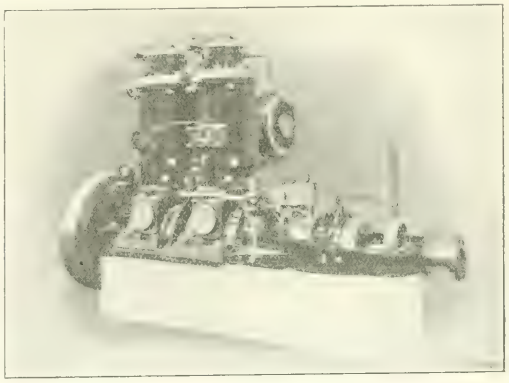
VISCOUNT JELLICOE'S TRIBUTE TO THE MERCHANT SERVICE.

The brief report we were able to give in our last issue of the twenty-fifth annual meeting of the Imperial Merchant Service Guild needs to be supplemented with the splendid tribute which Admiral Viscount Jellicoe paid to the British Merchant Service for the work they have done during the present war. He said his earliest experience of the merchant service during the present war was in connection with a distant relation of his, Commodore Haddock. They had an unfortunate incident off the north coast of Ireland in October, 1914, and Commodore Haddock came to the rescue, and the manner in which he handled the *Olympic* on that occasion won the heartfelt admiration of everyone who saw it. He very nearly succeeded in saving a fine ship whose name was never mentioned, and it was not his fault that he did not succeed. The work of the Guild during the present war had, he said, been quite extraordinary, for he had noticed in the annual report that they had supplied about 5,000 commissioned officers to the Admiralty for work in the Navy and in the auxiliary services. What the Navy would have done without those 5,000 commissioned officers he did not know, but he was quite sure that for their services in that work and other directions, the Guild had earned the sympathy of the Admiralty. Lord Jellicoe then passed under review quite a long list of concessions which the Guild has been able to obtain for the members during the past year, and which he said was a great tribute to the work which has been done. He was delighted that among them the award of the silver badge to the merchant service had been at last settled. While he had been at the Admiralty, he had been interested in the adoption of a standard uniform for the mercantile marine, and he was glad to see, although there was one point which is still in dispute, that the principle generally had been accepted. The Admiralty's view of the matter was, he thought, clearly seen in the offer that the naval crown should be used in the uniform, and as the Navy is very jealous of the naval crown, the offer of it by the Admiralty to the mercantile marine was a sign of the bringing of the two services closer together, to which he looked with so much joy when the war was over. So far as the Navy is concerned, Lord Jellicoe said the result of this closer relationship has been a feeling of intense admiration for the officers and men of the merchant service, and he ventured to express the hope that possibly the feeling might be, to some slight degree, reciprocated by the officers and men of the mercantile marine. Lord Jellicoe went on to say that when he was at the Admiralty, he felt that the award of honours was not sufficiently rapid nor generous for the mercantile marine, and he felt so strongly on the matter that he got a committee appointed, of which Admiral Palmer is chairman, and he hoped the work of that committee had resulted in not only speeding up the awards of honours, but in increasing their number. He noticed that the total number of awards to men of the mercantile marine now reached over 1,000, and that the number was not by any means too great when they considered that the Guild alone had some 20,000 officers as members. He looked upon Lieut.-Commander Sanders, one of the three merchant service officers who had gained the Victoria Cross, as one of the great heroes of the war from the naval point of view. The story of his deeds had yet to be written, but the man who realised what Lieut.-Commander Sanders did better than anybody else was his opponent, who was a German. It was with grief that he heard that the gallant officer had since been killed in the exercise of his duty. He was a New Zealand officer, and Lord Jellicoe said he had had painted certain incidents of his exploits, which he proposed to send to New Zealand after the war, as a tribute to a very heroic deed. In a concluding sentence, Lord Jellicoe said we have only one war aim, and that is to beat the Germans, and the officers and men of the mercantile marine are going to enable this country to do it, provided always they are given the ships with which to do so.

A STANDARDISED 150-TON MOTOR COASTER.

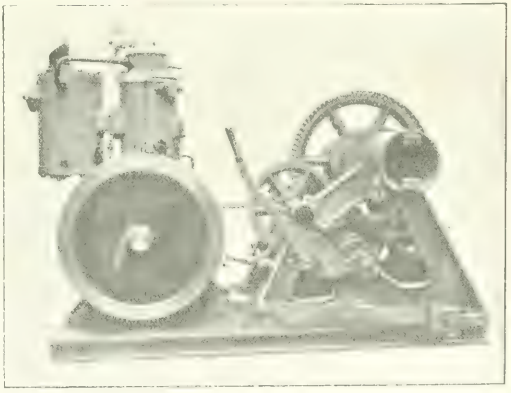
Before the outbreak of hostilities, considerable progress had been made in this country with the full-powered oil-engined coasting vessel. A comparatively large number of new boats had been built, among them being several of 300 to 450 tons capacity. The propelling machinery in practically every case was the heavy oil hot-bulb type of motor, or, as it is now more generally called, the surface-ignition oil engine. Various makes of engine were used in these boats.

Besides the craft intended for use in home waters, several highly



90 B.H.P. Kromhout Oil Engine with Reversing Gear.

successful boats were constructed in this country for service abroad, amongst them being the *Ila* and *Ife*, two very interesting vessels which were illustrated and described in *Shipbuilding and Shipping Record*, February 12, 1914. It is worth noting that all these boats made the passage to their ultimate destination, consisting in the majority of cases of an ocean voyage of several thousand



1-Ton Motor-Driven Cargo Winch.

miles, under their own power, and all without exception arrived quite safely and in good time, which gives a double proof to the suitability of internal-combustion engines for this type of vessel, and, but for the stopping of further developments in this direction owing to the war, there is no doubt that great strides would have been made.

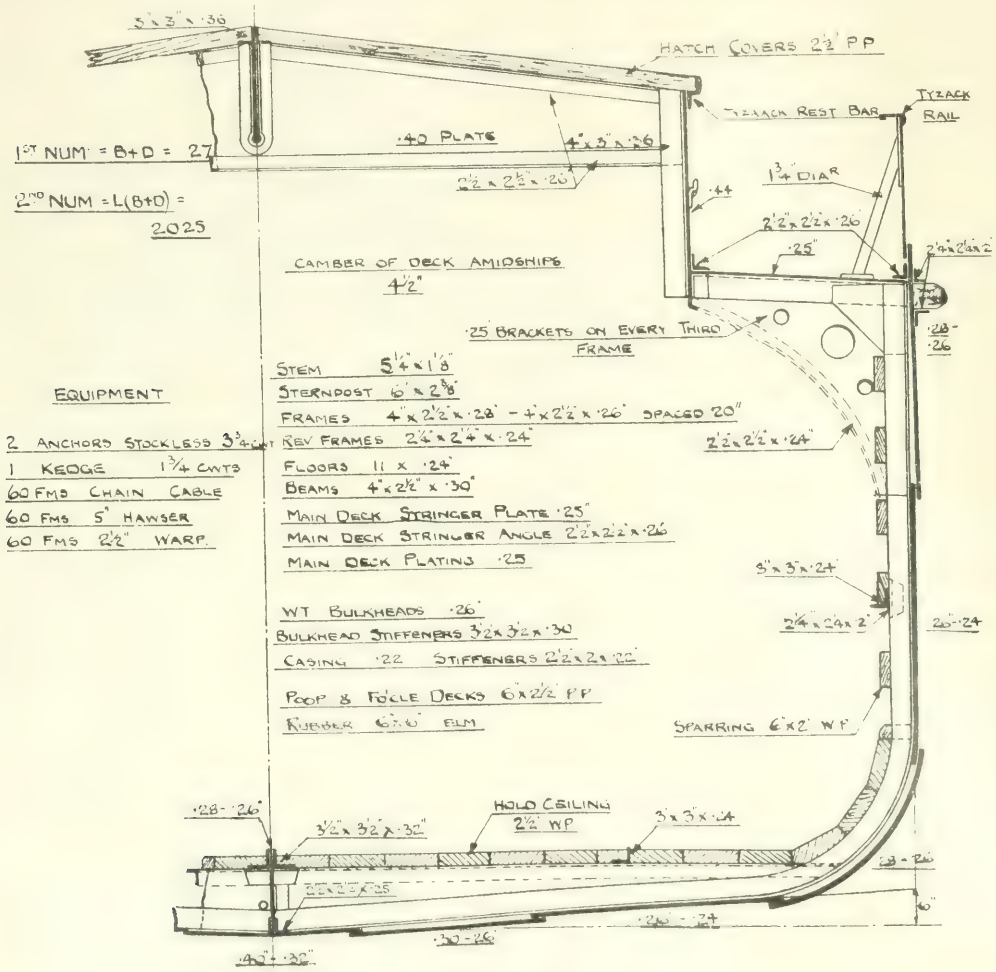
However, whilst the building of new motor coasting vessels has been greatly curtailed, during the past three years considerable improvements have been effected with the surface-ignition engine, and, as is generally known, it is now made in powers up to and as large as 500 b.h.p in 4-cylinder models. This makes it permissible to adopt it in the largest vessel used in the coasting trade of this country.

In view of the serious depletion of the coasting fleet during the period of hostilities, there is bound to be a great demand for vessels of this class after the war, and the accompanying plans represent a standard vessel of this type which has been specially designed to be built in large numbers. This vessel is one of a series of standard types which have been prepared by Perman & Co., Ltd., of London, and Mr. R. W. Courtney, of Southampton. It has been found in actual practice that this is a most successful type of coaster, and it therefore entirely justifies standardisation.

The general dimensions are as follows :—

On referring to the general arrangement, which is illustrated on page 287, it will be seen that the vessel is fitted with a raised monkey forecastle and poop, the machinery being placed aft.

The cargo hold amidships is 43 ft. in length and is clear of pillars, special deep brackets being fitted in lieu of same. The hatch is of extra large dimensions, this admitting of bulky articles such as large castings, pantechnicons, &c., being shipped. For working the cargo a 1-ton British Kromhout motor winch is fitted, with mast and derrick, which will be either wood or tubular steel, according to owner's requirements. The winch consumes the same fuel as the main engine, which is a distinct advantage.



Midship Section of a 150-ton Motor Coaster.

The scantlings of the rudder and stern frame are in excess of

The captain and engineer are berthed in a house fitted abaft the hatch, the top of which forms the navigating bridge. A hand-steering gear is provided, of substantial design, the leads going direct on deck to the quadrant. A balanced rudder has been adopted in order to enable the tail shaft to be drawn outboard, there not being sufficient room to draw same inboard.

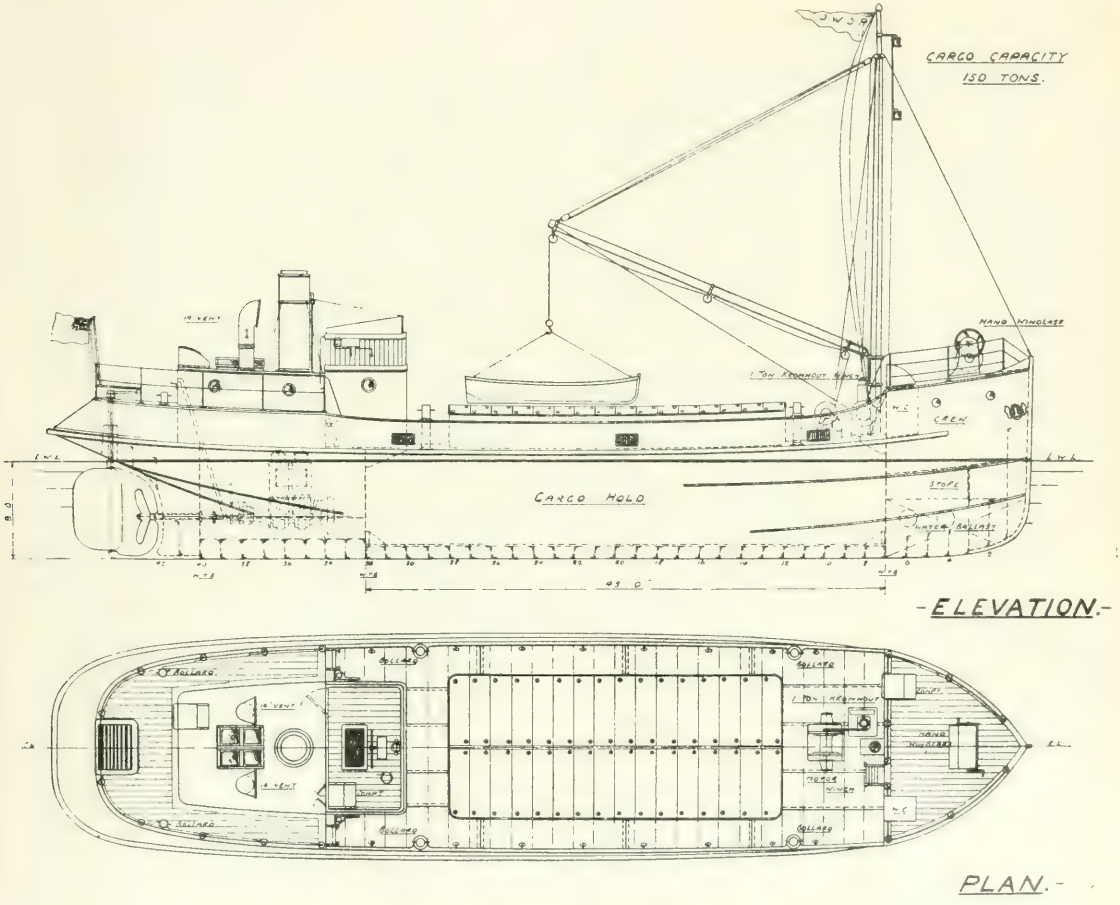
A 14-ft. wood lifeboat is carried, this being stowed when at sea on the hatch, which is the usual practice in this type of boat.

Lloyd's requirements, as these small full-lined boats experience severe strains on their rudders when in a seaway.

Accommodation for a crew of three is provided forward under the forecastle deck, the headroom in which is 7 ft., and, in view of the consideration which is now being given to crews' quarters on board ship, care has been taken to ensure that plenty of room is provided, and the accommodation will be well ahead of the average pre-war coaster with regard to comfort.

The machinery consists of a 90 b.h.p. British Kromhout marine oil engine of the M.P. type, developing its power at 300 r.p.m.

In constructing these boats it has been decided, whilst strictly standardising the lines and machinery arrangement and steel structure, to allow a certain amount of latitude to suit owners' minor requirements; for example, the vessel illustrated is intended solely for service in home waters, and a similar vessel might be required for service in the tropics, in which latter case teak decks, together with sun deck awnings, extra ventilation modifications to the crew's quarters, &c., would probably be required. All this, of course, could be done without departing from the standard practice as regards the principal structure.



General Arrangement of Standard 150-ton Motor Coaster.

This engine consumes any kind of residue oil, which is often erroneously called "crude" oil, and which has a specific gravity of ·86 to ·92, with a flash point of from 130° to 200° Fahr. Paraffin can also be used, but it is on the cheaper and commoner oils that the engine will run to advantage. The fuel consumption works out approximately at about 6¼ gallons per hour, and sufficient fuel will be carried in wing tanks situated in the engine room for a fortnight's consumption at full power. The whole of the machinery installation is supplied by Messrs. Perman, who have made a speciality of this class of work for many years.

On things reassuming the normal, work will be commenced on several of these boats.

The progress which the ferro-concrete vessel has made during the past few months has led the designer to give this new method of construction special consideration, and designs are being prepared for similar vessels to the one just described, constructed of ferro-concrete. There are, however, many drawbacks in constructing ferro-concrete boats of this size and type. The weight being practically 50 per cent. higher than that of a steel boat of similar dimensions and power, this, of course, means less cargo-carrying

capacity. Moreover, these small coasters have a great deal of shape to their hulls, which will make it necessary to have very elaborate shuttering for casting the structure between, and the expense of this both for first cost and subsequent renewals will be very heavy.

Several small coasting vessels have, however, recently been built as experimental craft in Norway and Sweden, and as regards structural strength, &c., they appear to be a complete success, but there is no doubt that the ultimate factor governing their general adoption as basis for future vessels will be the cost of production.

SHIPBUILDING AND REPAIR YARDS IN DENMARK.

The following information respecting Danish shipbuilding and repairing yards has been received at the Department of Overseas Trade (Development and Intelligence):—

Copenhagen.—The largest shipbuilding company in Denmark has its works at Copenhagen. It was started in 1872 and has a capital of 10,000,000 kroner. Motor liners of large size are this firm's speciality. Only one vessel was completed last year, a motor liner of 6,500 tons d.w. Four other vessels are now being completed, one steamer of 2,500 tons d.w., and three motor vessels of 10,700, 9,500 and 6,500 tons d.w. respectively; while 37 orders for vessels have been placed by various firms. Twenty-five new vessels have been built since 1910 by the firm, which employs 3,000 workmen. A considerable enlargement of works is contemplated, and when this is completed the firm will be able to manufacture 11 sets of Diesel engines per annum, each developing 3,000 h.p. This firm owns a floating dock, a graving dock and three patent slips.

Another Copenhagen company, formed in 1897, has a capital of 3,000,000 kroner. Last year a cargo and passenger vessel of 1,113 tons gross, and five steamships of about 1,206 tons gross, with a deadweight capacity of about 1,900 tons, were completed by this company, which owns two building berths in which vessels up to 265 ft. in length, and up to a deadweight capacity of 2,800 tons, can be built. Work has been commenced on a steamer of about 1,775 tons gross and another of about 1,190 tons gross. Orders have also been placed for a collier of about 1,100 tons gross, and for two steamers each up to about 4,000 tons d.w. There are three floating docks, one with 2,700 tons lifting power, for vessels up to 315 ft. long, the second of 600 tons lifting power, for vessels up to 175 ft. long; and the third of 3,800 tons lifting power, for vessels up to 345 ft. long. There is also one graving dock, for vessels up to 250 ft. long. Engines developing up to about 2,000 h.p. are constructed.

A third company has recently been formed at Copenhagen, with a capital of 1,500,000 kroner, with a view to constructing a shipbuilding and repairing yard. It is said that about 23,000 sq. m. of land near the new harbour have been leased from the Copenhagen Harbour authorities. It is proposed to construct two building slips, a temporary repairing slip, and eventually a floating dock. The vessels to be built will be about 2,000 to 3,000 tons d.w.

Aalborg.—A company, which has a capital of 1,500,000 kroner, has two building slips, each capable of taking a ship of 300 ft. in length. It is possible that a third slip may be constructed after the completion of the new dry dock, which is at present being built by the port authorities. Last November six vessels were under construction at, or on order from, this company, the total contract price for these vessels being 3,850,000 kroner. All these vessels are cargo vessels of one type. Their dimensions are:—Length between perpendiculars, 237 ft.; moulded breadth, 36 ft.; depth, 15 ft. 9 in.; indicated horse power, 285; [illegible] tonnage, 1,272; deadweight capacity, about 1,930 tons. The company has also contracted to built six cargo vessels, each of 2,100 gross tons, for a Norwegian steamship company.

Engines and boilers for the vessels are obtained from an Aarhus [illegible]

Anchors, chains, steam winches, sternposts, sidelights, steering gear, pumps, evaporators and propellers, have usually been imported from the United Kingdom. Owing, however, to difficulties in obtaining supplies, the firm has itself started to manufacture some of these goods.

The dry dock referred to above will be 280 ft. by 75 ft., with 20 ft. depth of water above the blocks, and will cost 1,250,000 kroner to build. It was hoped that the dock would be completed in March or April of this year. Vessels up to 7,000 tons d.w. will be able to be accommodated. The dock has been leased to the shipbuilding firm above referred to for a period of 50 years.

Aarhus.—There is only one firm engaged in shipbuilding at this port. It has a capital of 250,000 kroner, and up to the present has only built fishing vessels of between 40 and 50 tons, fitted with 25-h.p. motors. It is understood that the firm has arranged to build two wooden schooners, one of 500 tons d.w. and the other of 350 tons d.w.

Elsinore.—The local shipbuilding firm was started in 1881, and has a capital of 2,100,000 kroner. During the year ended June last three vessels were completed, having a gross tonnage of 1,894, 1,104 and 3,800 tons respectively. Seven vessels were on order from this firm last November, with an aggregate tonnage of 14,140.

There are three building slips, 350 ft., 300 ft., and 240 ft. respectively, in length. Under normal conditions five steamers a year can be built and engined in the yard.

Frederikshavn.—There is only one yard at Frederikshavn capable of constructing or repairing vessels over 100 tons register. The company owning the yard was formed in 1913 and has a capital of 220,000 kroner. Last year it delivered a tramp steamship of about 2,000 tons d.w., and at present another tramp steamer of the same deadweight capacity is being built, while two others of about 2,500 tons each have been ordered. There is a floating dock, belonging to the yard, 196 ft. long and 56 ft. broad, capable of taking vessels of 1,700 tons weight.

Korsor.—Korsor has two small yards for the construction of wooden vessels.

Randers district.—There is a small yard with two repairing slips at Hobro. During last summer a schooner of about 100 tons was launched from the yard.

There is a small yard with two repairing slips at Grenaa, from which small fishing boats were launched during the year.

Rodby.—A shipbuilding company, started at Rodby in 1916, has recently increased its capital to 1,000,000 kroner, with a view to extending its works. A new site has been acquired and the company will eventually have four slips. The new extension of the premises of this firm will be considerable, enabling the construction of vessels up to 4,000 tons. There will be three building slips and a patent repairing slip. Preparations are being made for the construction of a number of twin-screw steamers of about 1,420 tons gross.

Nakskov.—A company was started in 1916 with a capital of 1,000,000 kroner. This company will build both wooden and iron vessels, and the keels of two wooden motor vessels of medium size have already been laid. The yard will have three building slips for iron vessels of 3,000, 8,000 and 10,000 tons respectively.

Marstal.—A company was formed at Marstal in 1916, which is preparing for the building of a number of steel motor vessels of 157 and 400 tons [illegible] net.

Svendborg.—A company with a share capital of 1,500,000 kroner, is building a four-masted schooner of 600 tons d.w., which is nearly completed, and the keel has been laid of another vessel of the same size and type. Two similar vessels have been contracted for. The company, which contemplates extending its premises, is stated to have contracted with a Danish shipowner to build three steamships of 2,400 tons d.w. each, delivery to be given before the end of 1920. Another Svendborg firm builds wooden ships, and has under construction a four-masted schooner of 350 tons gross register. A third firm, which builds wooden ships, has under construction two four-masted schooners of 315 tons gross each and one three-masted schooner of 300 tons gross.

GENERAL NEWS SECTION.

PERSONAL.

Mr. Roger Beck, who is a director of Baldwins, has been unanimously elected chairman of the Swansea Harbour Trustees in place of Sir Griffith Thomas, resigned.

The death occurred suddenly on Saturday last of Mr. E. P. Lamport, of the firm of Lamport & Holt, Ltd., shipowners, Liverpool and London.

The Presidency of the Chamber of Shipping is no sinecure, even in normal times. The duties have become additionally heavy with the complications of war, and the retiring President, Sir Wm. Raeburn, has well earned the signal honour of knighthood on handing over the reins of office to Lord Inchcape. What Sir William's colleagues think of his work will be gathered from the report of the annual meeting of the Chamber of Shipping, which we publish on pages 291 to 294. It is sufficiently eloquent to need no embellishment. Lord Inchcape is not new to the office. He brings with him on this occasion the weight, authority and respect attached to the chairmanship of the Peninsular & Oriental and British India Lines. When Sir Thomas Sutherland relinquished the chair of the Peninsular & Oriental he did so in the full knowledge that in Lord Inchcape he had a successor worthy of the best traditions of that Line. The vigorous defences which his Lordship has made from time to time on behalf of British shipping and private enterprise are fresh in the memory of our readers. At last year's meeting of the Chamber of Shipping he spoke specially on that topic, and it will be noted from his presidential address last week that he considered the idea of the nationalisation of shipping as exploded.

The Right Hon. Lord Inchcape,
President, Chamber of Shipping.

Sir W. H. Raeburn,
Past President, Chamber of Shipping.

In a Reuter message from Paris the death is announced of M. Charles Roux, Chairman of the Central Committee of French Shipowners.

The death occurred on Sunday last, at Dublin, of Sir William Watson, at the age of 76 years, a son of the late Mr. William Watson, J.P. He was Chairman and Managing Director of the City of Dublin Steam Packet Company.

Alderman W. J. Trounce, J.P., died at Cardiff, on March 6. He was born at Penzance in 1843, and came to Cardiff when only six years of age. His business career was started in the office of a French shipbroker at Cardiff Docks. In 1863 he commenced business on his own account as a shipbroker. For a period of about 28 years he represented Thomas Cook & Sons. He was Mayor of Cardiff in 1893-4, and represented the Corporation at the opening of the Manchester Ship Canal and the Tower Bridge in London.

Mr. Herbert Shaw, Secretary of the Newcastle Chamber of Commerce and of the Commercial Exchange, has been elected a Director of the Commercial Exchange Company. Mr. A. Munro Sutherland, shipowner, has been appointed a Vice-Chairman of the Exchange.

Mr. W. Seidler, who died at Newport on Friday last, was 71 years of age, and started at the Cardiff Docks about 50 years ago in the offices of Page, Olsen & Co., shipbrokers, &c. For 25 years he was on the staff of Tellefsen & Co., and for the past 10 years had acted as Secretary to the Norwegian Consul at Cardiff.

Mr. Robert Spence, M.E., for 23 years Commodore Chief Engineer of the City of Dublin Steam Packet Company, passed away in Dublin last week after a long illness. Mr. Spence was the eldest son of the late Mr. Alexander Spence, senior partner of the firm of Spence Brothers, boilermakers and engineers, Dublin.

The death is announced of Captain E. Brailey Hatfield, a member of the Executive Council of the Mercantile Marine Service Association, who was lost at sea on February 19, through the torpedoing of his ship. He was the son of the late Captain E. B. Hatfield, of Liverpool and Nova Scotia, who was a prominent figure in Liverpool shipping circles up to his death a few years ago.

Mr. C. H. Wordingham, M.I.C.E., whose official title under the Admiralty has hitherto been that of Superintending Electrical Engineer, will in future be known as Director of Electrical Engineering. His department will no longer be attached to that of the Director of Naval Construction, but will be entirely separate and self-contained.

Colonel James Lithgow, who, as stated by Dr. Macnamara on Tuesday, has been given fuller control of the shipbuilding programme, is one of the partners of Russell & Co., shipbuilders, Port Glasgow. The firm was founded in 1874, when Mr. T. Lithgow, in association with Mr. Joseph Russell, who died in June last year, and the late Mr. Anderson Rodger, established a shipbuilding business at the Bay Shipyard, Port Glasgow. The undertaking was a success from the outset and it was soon greatly extended in several directions. Port Glasgow graving dock was acquired, and a few years later they took over the Greenock yard (now occupied by the Greenock & Grangemouth Dockyard Company) and subsequently the Kingston Yard, which eventually became the centre of their work. A dissolution of partnership took place in 1891, when Mr. Russell and Mr. Rodger separated from the firm, the latter then taking over the original yard. The business of Russell & Co. was carried on by Mr. Lithgow, and latterly by his sons, the present Messrs. Lithgow. In November last the firm acquired the engineering business of David Rowan & Co., of Glasgow, a comparatively recent transaction.

LIVERPOOL AND LONDON WAR RISKS INSURANCE ASSOCIATION.

Annual Meeting.

Presiding over the annual meeting of the Liverpool & London War Risks Insurance Association, at Liverpool, on Tuesday, this week, Mr. James Bruce Ismay (Chairman), in moving the adoption of the annual report, said that the outstanding point in the report was the new arrangement with the Government. For three years of war they had worked as partners with the State in administering, on joint account, and at joint risk, the War Risks Insurance Scheme, but when the Government took over practically all their ships the basis of that partnership was destroyed and other arrangements had had to be made. It was not possible to give, that day, a final balance sheet of the partnership, because, under their articles of association, the premiums received and the losses paid during the war were to be dealt with in one account at the end of the war, but it was possible to summarise, broadly, the results.

During the three years the contributive values entered in the Association had averaged, in round figures, £80,000,000. As the cost of replacements increased the insurable values were advanced, first by 20 per cent. and subsequently by 50 per cent., but throughout the three years the contributive values had been calculated on the basis of the cost of the vessels entered, less depreciation at the rate of 4 per cent. per annum; and it was upon these contributive values that the subscriptions to cover the cost of management, and the calls, had been levied. The Association adhered throughout the partnership to the practice of requiring each member to enter the whole of his fleet, whether or not he was using for particular vessels the insurance facilities offered by the Association. So far as this Association was concerned, they limited their operations strictly to the values that could be re-insured as to 80 per cent. with the State; they dealt with excess values in a separate Association in which it was open to each member to enter all or any of his vessels.

Entry in this Association, first, insured without premium the vessels that were in enemy ports or on voyage on the outbreak of the war; second, entitled the member to insure, as and when he pleased, at fixed rates of premium, against King's Enemy risks, voyages started after the declaration of war; third, protected the crews of the entered vessels, whether such vessels were insured or not, against King's Enemy risks, under the Seamen's War Risk Compensation Scheme; fourth, insured, without premium, against war risks, other than King's Enemy risks; and fifth, placed at the disposal of the member the organisation of the Association. In exchange for these advantages the entry imposed on the member the obligation to contribute, on the basis of the entered values, to all such calls as were needed to make good the amount by which the net claims exceeded the net premiums; that is, the deficit to be provided by the Association after taking into account the premiums paid to the State, and the losses recovered under its re-insurances with the State.

This deficit, so far as it could be at present ascertained, is shown in the report; it amounted in round figures (after taking into account the salvage received and the interest earned) to £1,200,000. As the contributive values had averaged £80,000,000, the calls covering the three years would amount to about 30s. per cent., or at the rate of 10s. per cent. per annum on the contributive values.

It had been suggested in some quarters that it was inequitable to levy calls on the fully requisitioned ships. He did not agree with that view. For the successful working of a mutual War Risk Insurance Scheme, the first essential was that the risks be widely spread over definite values. It would have been difficult, if not impossible, to have got individual members in an Association such as theirs, in which of necessity very large individual values had to be insured, to assume liabilities for calls if the values over which those calls were to be distributed, and therefore the amount of the calls themselves, had been made dependent on the action of the Government in regard to the number of vessels it requisitioned. Further, the insurance facilities offered by the Association had to be available at all times, to all members, because the vessel which was fully requisitioned for one voyage, or for part of a year, might be free and requiring insurance facilities on other voyages or for the remainder of the year; and an organisation effective to do the work they had undertaken could only be maintained at the risk of calls spread over very large values. Apart from these considerations, the liabilities assumed by the Association in respect of vessels which on the declaration of war were in enemy ports or at sea, and the liabilities assumed under the Seamen's War Risk Compensation Scheme, had been heavy; and these liabilities had in any event to be covered by calls, as no premiums were received against the risks assumed, and all vessels, whether requisitioned or not, were covered.

The calls had been made on the minimum values, that is, on the basis of first cost, less depreciation, and not on the values insured; whilst the premiums, on the values actually insured, had been collected from the members who availed themselves of the insurance facilities offered by the Association. The result had been that all the entered vessels, including the fully requisitioned ships, had paid calls at the rate of 10s. per cent. per annum on the contributive values. To his mind there was nothing inequitable or unreasonable in the levy of such calls on the fully requisitioned ships. On the contrary, he ventured to think that the Association had given to all its members, including the owners of the fully-requisitioned ships, very full value in return for the calls it had made.

They were no longer partners with the State in the working of the War Risks Insurance Scheme, for the Government had decided that in the management of shipping the Nation could be best served by eliminating all individual enterprise. But they had placed at the disposal of the State the organisation they had built up and were maintaining at their own cost; and they were carrying on operations with the same care and prudence as if they were still carrying on their own business and working for the benefit of their members.

Under the new arrangement the State, by putting up the premiums, had made a profit, a very large profit, out of the insurances accepted by the Association since August 20, 1917.

The administration of the Seamen's War Risk Compensation Scheme has continued to occupy much time. In respect of the vessels entered in the Association, they had dealt with 2,385 cases, the total capital value of the payments under the Workmen's Compensation Act and of the pensions and allowances granted representing £681,181. In respect of the vessels which were not entered in any War Risk Association, where they were administering the scheme for the Government, they had dealt with 786 cases, representing pensions and allowances of the capital value of £283,875.

During the year they had, through the liberality of the members of the Association, established a special Fund for the Advancement of Officers' Children. This special fund, which exceeded £35,000, would be administered under the control of the Committee with the object of securing, so far as the means available permitted, that the children of officers serving on vessels entered in the Association who lost their lives through war perils, were given as good a start in life as the father would have provided if he had lived.

The report was adopted.

Excess Values War Risks Association.

The annual meeting was subsequently held of the Excess Values (Liverpool and London) War Risks Insurance Association, Ltd., Mr. J. Bruce Ismay again presiding.

In moving the adoption of the report for the year ended February 19, 1918, Mr. Bruce Ismay said that the operations of the Association from its formation in June, 1916, up to August 20, 1917, when the new arrangement with the Government came into force, resulted in a deficit, amounting, so far as could be at present ascertained, to the sum of £5,845,349. As against this deficit three calls had been made equalling, in the aggregate, 218s. 6d. per cent. on the entered contributive values; leaving still to be provided, after taking into account interest received and salvage recovered, a balance of £575,129. A further call would be made to cover this balance as soon as the losses on the insurances effected prior to August 20, 1917, had been finally adjusted. The calls made, and to be made, would represent an addition to the premiums paid, equal to about 63s. per cent. on the amounts insured. As from August 20, 1917, all risks accepted by the Association have been re-insured to the full 100 per cent. with the State, and all values insured have been approved by the Shipping Controller. It followed that so long as this arrangement remained in operation further losses, to be met by calls, could not arise.

Relief and Reconstruction of French Shipping.—A Central News message from Paris states that M. Fernand Bouisson, Maritime Transport Commissioner, has addressed to shipowners a letter detailing the conditions in which requisitions of French steamers will be effected and regulated. He announces that the Government has drawn up a programme for repair and for immediate construction to replace lost shipping. The Government will ask from the Chamber [illegible] element of the reconstruction.

CHAMBER OF SHIPPING OF THE UNITED KINGDOM.

ANNUAL MEETING.

The forty-first annual meeting of the Chamber of Shipping was held at the Skinners' Hall, Dowgate Hill, E.C., on Wednesday, March 6. Sir William Raeburn, the retiring president, took the chair at the commencement of the proceedings. The following is a list of those present:—

Mr. Arthur Cook, Mr. A. W. Gordon, Mr. J. Herbert Scrutton, Mr. F. S. Watts (Shipowners' Parliamentary Committee), Mr. Cuthbert Laws (Shipping Federation), Mr. Stephens, Mr. F. C. Allen, Mr. I. M. Shields, Mr. F. Ritchie, Sir Owen Philipps, Sir Walter Runciman, Bart., Mr. A. S. Kettlewell, Mr. R. Corry, Mr. Alfred Woods, Mr. M. S. Turner, Mr. Arthur Serena, Mr. F. W. Lund, Mr. W. Netherton Johnson, Mr. H. R. Mullet, Mr. Ernest W. Glover, Mr. J. Howard Glover, Mr. George Dodd, Mr. Howard Houlder, Mr. G. T. Sanderson, Mr. D. W. Stobart, Mr. W. G. Glover, Mr. Richard White, Captain H. B. Hooper, Mr. H. R. Cayzer, Lieut.-Commander, A. B. T. Cayzer, R.N., Mr. J. J. D. Botterell, Mr. John B. Wimble, Mr. A. Pears, Mr. J. H. Jones, Mr. E. S. Gedge, Mr. C. Doresa, Mr. F. A. Holman, and Sir Thomas L. Devitt, Bart. (London); Mr. Ernest Cook and Mr. F. T. Harrison (Liverpool); Sir W. H. Seager, Mr. Lewis Lougher, Mr. S. W. Hansen, Mr. J. C. Gould, Mr. John Cory, Mr. Thomas H. Mordey (Cardiff); Mr. J. W. Witherington, Mr. George W. Stansfield, Mr. R. M. Sutton, Mr. A. Munroe Sutherland, Mr. W. J. Noble, Mr. D. Stephen, Mr. James Emery Tully, and Mr. Ralph Carr (Newcastle-on-Tyne); Mr. C. Hartly Hodder and Mr. H. Wynne Jones (Bristol); Mr. Robert A. Somerville and Mr. J. H. Warrack (Leith); Mr. William J. Robertson, Sir William H. Raeburn, Mr. Walter Patterson, Mr. Robert J. Dunlop, Mr. W. S. Workman and Mr. Leonard Gow (Glasgow); Mr. W. Turpin (Swansea); Mr. John Denholm (Greenock); Mr. Arthur Ritson (Sunderland); Sir William Corry, Bart. (Belfast); Mr. O. Sanderson (Hull); Mr. J. H. Harrowing (Whitby).

The Chairman, after expressing the thanks of the Chamber to the Skinners' Company for granting the use of their hall, proposed the adoption of the annual report, which, he said, indicated the amount of work the Chamber had been doing during the past year. As to the financial position, the income for last year had not only met current expenditure, but it had defrayed the expense of the alteration, equipment and furnishing of the new premises, and they started the present year with a substantial balance in hand. It had not fallen to the lot of any previous President to be able to announce that financially the Chamber was so strong.

Mr. J. H. Scrutton seconded the adoption of the report, and the motion was carried.

The President, prior to vacating the chair in favour of his successor, reviewed the work of the past year. Apart from what was in the annual report, he said, a very great deal of work had to be done away from the public gaze, and more so than ever at the present time. The year had been an exceptionally busy one for the President and Vice-President in the matter of interviews. Notwithstanding that the Executive Committee consisted of some 50 members there had been a peculiar unanimity in all their deliberations throughout the year. He specially mentioned this because they had been twitted from time to time by certain of the Press that they were not doing very much, and that what was done was not in accordance with the views of many of the members. They were always open to criticism, but he liked it, if possible, to be fair. The U-boat menace had been and still was a serious one, but that would not win the war if everyone did their duty, and he believed there was waiting for those "scientific savages who had been out on a murderous career ever since the war began" a retribution which would far outweigh any material retribution which this country or our allies would ever wish to exact.

Trade after the War.

The chief work of the year was the trade after the war report. That report had been well received by the Press, and he knew that the Board of Trade Departmental Committee which inquired into the shipping and shipbuilding industry had expressed in their report their very great appreciation of the work done by the Chamber. Another important work nearly completed was the re-constitution of the Chamber. They were applying for a Royal Charter and when that was accomplished the Chamber would embrace all the shipping of the United Kingdom except some of the tonnage, chiefly liner, that was represented in the Liverpool Association. They would then be in the happy position, if they worked together, of being a united body, which he was sorry to say they had not been hitherto.

With regard to depreciation for income tax purposes, that used to be calculated on the original value, but it was now to be calculated on the price the owner paid for the boat, which was something. There had been a great many questions discussed with various Government departments and he wished to thank those departments for the courtesy with which they always heard the shipowners. On the question of Blue Book rates there had been two interviews with the Controller of Shipping, but he could not say what the result would be, but so far as could be judged he thought there was going to be some relief, especially to the smaller classes of boat. He hoped that the moderate report which the Chamber had put forward and which the Controller agreed was reasonable would be accepted. Whatever the settlement it would not please everybody, but he thought the report was the best they would be able to get. The shipping industry had been villified and held up throughout the country as profiteers, but if they went through the profit and loss accounts it would be difficult to find where the profiteering came in. At any rate, they were no longer profiteers; the profiteers were the Government. He hoped the public would realise that if the rates were high before, they were higher now that the Government had the matter in hand, but to be quite fair he would say that that was accounted for in the rise in the rate of insurance.

Standard Ships and Nationalisation.

They were often asked what was the Government policy with regard to the shipping industry. He thought the policy of the Government was perfectly clear, and that was to build standard ships and nothing but standard ships. A concession had been made by allowing one vessel out of every seven to be of a larger size than the ordinary standard ship, but the present state of affairs was so serious that it would probably cut into that arrangement. They all knew what a disadvantage it was to firms that had been accustomed to build vessels to their own requirements to have to submit to standard ships, but in an emergency like this the standard ship was a quite justifiable policy. They were very good ships and would find a ready market when the time came, but at the same time if many owners had been allowed to build to their own designs, and to the designs which their shipbuilders had been accustomed to, there would have been quite as good delivery and a better ship. With regard to the policy of the Government in the future he thought they would find, unless there was a big change, that the Government idea was to release as many privately-owned ships as soon as possible after the war and to use the standard ships for demobilisation purposes and finally to sell these standard ships to the best account. There were two reports, the Departmental report and the report of the Chamber, and if the Government was at all on the lines of these two reports—he sincerely hoped it would be—it would be a wise thing for the Government to make some declaration which would lay to rest a great deal of the uncertainty at present prevailing which was a terror to enterprise, because those amongst whom this uncertainty existed could not put that spirit into the industry that they had been accustomed to in the past, and which would have to be put into it if we were to resume the position which we hitherto held. Nevertheless, they must back up the Government as far as they possibly could to win the war. He thought shipowners could lay claim to having acted with the greatest loyalty to the Government and to have helped them in every way, and they would continue to do so. He thought they could put their minds at rest as to nationalisation.

The Shipbuilding Position.

Shipbuilding was bulking more largely in the public eye at the present moment than anything else. Sir Eric Geddes' speech to Parliament was no worse than was expected. It showed a serious

state of things and there was no mystery about it. Some good plain speaking from the Chamber would do good and his intention was to say something on the subject. The two elements which were causing this disastrously slow production of tonnage were the Government and labour, and he thought it was quite unfair of Sir Eric Geddes to attack the builders. He held no brief for the builders, but he thought it was not the case that it was due to any slackness on their part—unless it was that the spirit had been knocked out of many of them by Government interference during the past few years. They were the helpless servants of the Government and their employees. It was high time the country knew, and he hoped something would be said which would open the eyes of the public. Perhaps the remarks of Sir Eric Geddes were made in the old spirit of the Government which, when reproving labour, gave a slap on the other side. All he could say was that if there was a shipbuilder who was keeping back work in any way he would like to know his name. He did not know who it was. Although the position was serious we must not run away with the idea that the month of January was typical of what we could do. There were a number of reasons for the position and one of them was the 12½ per cent. bonus, which had cost the country millions, but what he feared worse was the cost in the delay in output. He believed there was a great output coming from America, although it might not be for us, yet it would all be for the cause of the Allies. Canada had been stuck up by bad weather and congestion on the railways, but the weather was now better and materials were coming forward and the output would be very satisfactory this year. In this way the balance against us would be steadily decreased. The Chamber was working in very close alliance with the Admiralty against which a great deal of unfair criticism had been levelled. In conclusion, Sir William paid a tribute to the work of the Shipping Controller.

On the motion of Sir Ernest Glover, seconded by Mr. W. J. Noble, a hearty vote of thanks was accorded to Sir William Raeburn for his services during the past year. As a lasting record of his year of office, Mr. Noble suggested that the President's portrait should be hung.

Sir William Raeburn having acknowledged the vote of thanks, proposed that Lord Inchcape should be elected President. He pointed out that in the ordinary course of events Mr. J. H. Scrutton, the Vice-President, would have occupied the chair, but it was felt that at the present time the Chamber should have at its head the most influential man they could get, and there was no difficulty in coming to the conclusion who that man was, a decision with which Mr. Scrutton heartily agreed.

Mr. J. C. Gould seconded the motion, which was carried.

Sir William Raeburn proposed the re-election of Mr. Scrutton as Vice-President. This was seconded by Mr. J. D. Wimble and carried.

Presidential Address.

Lord Inchcape then took the chair and delivered the Presidential address as follows:—

Gentlemen,—You are all very busy men, your time is valuable. I do not propose to detain you by a long address. I am also fairly busy, what with Government Committees of all kinds and the business with which I am charged. I hope, therefore, you will treat me leniently if I disappoint you in the range of my remarks.

In the first place, gentlemen, we must congratulate Sir William Raeburn on the dignity recently conferred on him by the King. Sir William has done yeoman service as President of the Chamber of Shipping of the United Kingdom for the past two years, and this, combined with his distinguished career, fully entitles him to the honour which he has received. I am sure you will join with me in wishing him long life to enjoy the fruits of his labours.

I hope you will allow me to thank you for having elected me for the second time after a considerable number of years to be President of the Chamber of Shipping of the United Kingdom. It was an honour to which I did not aspire, and which I would have been glad to forgo, as my hands are pretty full, but the persuasive power of Sir William Raeburn and Mr. Scrutton were too much for me, and I can only say that I shall endeavour, with the assistance which Mr. Scrutton has promised to give me, to do my duty to the Chamber.

Why More Cargo is Carried.

I notice that it is being claimed that more cargo is being brought to this country per ton of the vessels' registered tonnage than before the war, and that despite the reduction in our tonnage by enemy action the imports into this country have only gone down very little. This may give the impression that State control is better than individual management; but this is an absolute fallacy. In the first place the steamers are not loaded by Government agents, they are loaded by the owners' organisations which existed before the war. In the second place, the cargo carrying capacity per ton of the vessels engaged in bringing goods to this country is very much greater than it was before the war, because all, or nearly all, the passenger liners of high speed and small cargo capacity compared with their registered tonnage are now engaged as transports, armed cruisers, or hospital ships. In the third place, before the war vessels engaged in regular trades landed large portions of their cargoes at intermediate ports of call *en route* to this country, and frequently arrived with only half cargoes. In the fourth place, it must not be forgotten that Government raised the load line some time ago, which enabled many ships to carry more than in pre-war times, while nearly every British ship in every part of the world has been caught hold of and made use of to bring cargo to this country. Ships from the Indian and China coasts, from the Australian coasts, from the Federated Malay States, from the West Coast of America, from the Pacific—vessels which, when they were built, were never intended to see these shores again—have all been brought into requisition to bring goods to the Mother Country.

International Trade.

It has been at the expense of our international trade, much of which we have for the moment lost, and much of which we shall have difficulty in recovering. Those of us who have suffered in this way make no complaint, we have ungrudgingly put our ships at the service of the Government, and if we never recover our trades we cannot help it. We recognise that the loss of a few hundred thousand pounds is nothing compared with the loss of one young life. But I think we should let it be understood that the small reduction of the imports into this country despite the enormous reduction in the tonnage of the world, is not because ships have been better loaded or handled, but because all our outlying tonnage engaged in cross-sea and coasting trade abroad has been hauled into the net for bringing supplies to these islands.

Shipowners were not born yesterday, they know what ideal cargoes are, and I am safe in saying if a vessel left her last loading port without being both full and down to her draught, which we all know means a properly and economically selected cargo, the owners would want to know the reason why, both from the captain and the agents.

"Nationalisation" Exploded.

I have recently expressed my views on more than one occasion about a ridiculous proposal for the nationalisation of shipping. So far as I have been able to gather, that idea is exploded. I have already said all I have to say on the subject, and there is nothing to be gained by flogging a dead horse.

A "Profiteering" Shift.

We have heard very little lately of profiteering by shipowners, and, as far as one can judge, very few of us will have to contribute to the Revenue by payment of excess profits duty for 1918. Public attention has gone from shipowners and is now concentrated on farmers, who, according to Lord Rhondda, have never done so well in the memory of man. Farmers are exempted from the payment of excess profits duty. They get this exemption, it is said, because they keep no books.

The losses which shipowners are sustaining by the sinking of their ships are very serious. The insurance money which is being recovered, owing to the fall in the purchasing price of gold, will be quite insufficient to replace the ships, and it will be years before our fleets can be built up again to anything like their pre-war level.

The outlook is by no means promising, but we must all keep a stout heart and face the future with equanimity. Nothing we can possibly lose would be so bad as to lose the war.

Commerce and "Rings."

The Association of Chambers of Commerce of the United Kingdom have lately been expending a good deal of wind and ink in suggesting that the British mercantile marine should be brought under some system of State control after the war. Since they began their agitation, however, they find that the control of their own operations is extremely inconvenient, and they are raising an agitation against it being continued after the war. The fact is, gentlemen, that any system of Government control of the business of the country would be fatal, and if it is established in one industry it will have to be established in all.

As shipowners we have been up against "rings" of many sorts for many years. We could only buy bedsteads from a bedstead "ring." We could not buy electric lamps except from a ring. I do not know much about cotton, but I have heard of the Fine

Spinners' Association, and in regard to steel my shipbuilding friends have often quoted the steel combination. I do not care where you go you will have a certain amount of combination for the protection of trade, and even before the war German and British shipowners were forced to combine to protect themselves. Whether British and German manufacturers and merchants had any agreements of the sort I do not know. I think possibly they had, but of this I am quite confident, no arrangement will be made with Germans after their inhuman procedure by British shipowners for generations to come, which will penalise the consumer either in the way of cost or freight.

The members of the Association of Chambers of Commerce of the United Kingdom may therefore rest quietly in their beds so far as shipowners are concerned. It would be a disastrous calamity in this war, when we are face to face with the enemy, if we started an internecine fight. Whether we are manufacturers, whether we are distributors, or whether we are shipowners, the shares held in all our manufacturing, distributing and shipping concerns are held by the people, and the last thing we should do is to begin quarrelling among ourselves.

The Gravity of Sinkings.

There is a curious lack of reality in many parts of the country as to the grave position with which we are faced to-day. Our tonnage is being sunk at a rate of which the people have no conception. We are told every Thursday that so many vessels of a tonnage of under 1,600 tons and so many vessels of over 1,600 tons have been sent to the bottom by enemy action. This conveys nothing to the public. One vessel of 17,000 tons might be destroyed, and she is only recorded as one ship over 1,600 tons.

I honestly think more information might well be given to the people as to what we are really losing, so that they might appreciate the gravity of the situation. I was on the Clyde last Saturday, and at noon the whistle in a large building yard sounded, and the moment it went every soul in the yard threw down his tools and bolted. Not a sound was heard in Clydesdale after 12 o'clock on Saturday. It might have been that no war was going on, and that no new ships, no destroyers to hunt submarines were required. There is, I admit, a limit to human endurance, and, as Mr. Bonar Law said the other day, men get tired, but unless we all put our hearts into the fight, whether we are engaged in handicraft or in brain craft, we shall all suffer alike.

Investors in Shipping.

The people of this country who have invested their money in shipping have a rough time ahead of them. I hope they will face the situation bravely, and when the day of low dividends or no dividends comes, as it undoubtedly will, I hope they will not throw up the sponge and decline to have anything more to do with shipping. We have gone through bad times, as you all know, and we have had occasional good times, but on the average we have made no more than any properly organised and well-conducted business has done, and, above all, with the income tax, a large share of the product of our energies and activities has gone to the State. If legislation is brought in which will kill individual energy, initiative and enterprise, I do not know how the country is to pay its way. I have confidence, however, in the good sense of the community, and I have no misgivings as to the future of the Empire if only prudence is allowed to prevail in its councils.

The resolutions were then proceeded with, reference being made by the President to the fact that they were all put forward by the Executive Council. They were all carried.

Royal and Allied Navies.

The President proposed, and Mr. Arthur Ritson seconded, the following resolution :—

> That this Chamber, while recognising the continued existence of the obligation under which the mercantile marine rests to the Royal and Allied Navies, desires particularly to express its confidence in and gratitude to those members of the services who have been charged with the difficult task of defending merchant ships against the inhuman attacks of enemy submarines.

Merchant Service.

> That the members of this Chamber, being the owners of a large majority of British shipping, desire to express their high appreciation of the services rendered by the captains and the whole personnel of the mercantile marine, who, by their devotion to duty in face of unexampled perils, have earned the admiration of the whole Empire.

Mr. R. J. Dunlop, in proposing this resolution, said that when the Germans started the U-boat campaign they thought they would frighten our seamen from going to sea, but it was one of the greatest mistakes they had ever made. He could not help feeling that if the shipyard workers knew the position as they ought to they would follow the example of our seamen and assist them to defeat the U-boats.

Sir W. H. Seager seconded.

United States of America.

> That this Chamber welcomes the entry into the War of the United States of America, not only on account of the military assistance they will render to the Allied forces, but also and chiefly because it is a recognition of the principles for which the British Empire and its Allies have been fighting and will continue to fight until the end is attained.

Sir Owen Philipps, K.C.M.G., who proposed this resolution, said that we all felt in this country that the high ideals for which we were fighting would make an irresistible appeal to our friends across the Atlantic. Notwithstanding the magnificent Army which the Americans were sending over he regarded their help in shipbuilding as of even greater importance. He wished our Government and that of America would endeavour to stimulate shipbuilding by creating competition between yard and yard and district and district, and eventually between yards in this country and in America. He believed it would be of the greatest good if the Governments of the two nations published the time taken from the laying down of a keel to the trial trip. That would stimulate the competition which he had mentioned.

Ex-Provost Denholm seconded the resolution in a brief speech in which he welcomed the Americans on our side in the war.

Desertions from British and Allied Vessels.

> That His Majesty's Government be requested to make representations to the Government of the United States as to the urgent necessity for taking prompt and effective measures to prevent desertion from vessels of the Allies, when in Ports of the United States, by the immediate return to their vessels or deportation of deserters by a rigorous suppression of the crimping system, by a strict enforcement of a system of identification for all seamen in the United States, by the prohibition of the employment of foreigners who are natives of the Allied States, on vessels of the United States, and by such other means as may be calculated to attain the object in view.

Mr. F. S. Watts, in proposing, said that but for the previous resolution he did not think this one would have been put forward. The Chamber had long been trying to get something done in this matter. When the last American Shipping Bill was introduced in 1916, active steps were taken to get some alterations made with a view to getting some control over the desertions and to prevent crimps getting men away from British vessels and charging blood money for replacing them. Now that the Americans were our Allies in the war the time was opportune for asking them to assist us in taking such steps as would enable us to keep our men and encourage them not to desert.

Mr. Howard Glover seconded.

Sir Cuthbert Laws, general manager of the Shipping Federation, said that every effort should be made to render desertion a losing game, both to the crimp and to the sailor, who should not be re-employed at greatly enhanced wages on British and American boats as hitherto, but who should be faced with the cold prospect of a passage home to his own country, in his own time, and at his own expense. That would destroy the incentive, and once the incentive was destroyed, desertion was dead.

Mr. Workman said that just before leaving Glasgow he had received a report that the United States was taking steps in this matter, which were now being acted upon.

Shipbuilding.

> That this Chamber regrets that the progress of commercial shipbuilding in this country is still far from satisfactory, and desires to impress upon His Majesty's Government that it is of vital importance to secure the output of tonnage foreshadowed by the First Lord of the Admiralty.

Sir John Ellerman, Bart., in proposing this resolution, said that the result of transferring the initiative and enterprise in shipbuilding to the State had been most disappointing. Up to the end of February or during the 13 months that the whole united resources of the country had been devoted to new construction, 17 steamers of 86,000 tons gross, with a carrying capacity of approximately 130,000 tons, had been constructed. During the same period of private enterprise over 1,030,000 tons, or a carrying capacity of 1,500,000 tons had been constructed. Up to February of this year, or 13 months after we were told that the entire resources of the country could build standard ships in five or six months, only five steamers of very small tonnage had been built. In this they had the best expression of the Government Departmental work as against the push and go of the private owner. The whole output of standard ships was less than what in an average fortnight was

sunk by the enemy, leaving our ordinary marine casualties, which owing to the conditions were double and treble what they were in pre-war times. He believed he was right in saying that the whole output of the country since the commencement of the war had not been sufficient to replace the losses by marine casualties, leaving the whole of the losses by enemy action yet to be made up. If private owners had been allowed to build themselves he had no hesitation in saying that the output since February last year would have been very much greater. In view of the fact that our losess were so serious, he unhesitatingly stated that it would be wise if the people were taken into the confidence of the Government and allowed to know the real serious shortage of tonnage which the country had been driven into. It was the high wages that were being given to the working man which were responsible for the loss of output that had arisen in this country.

Mr. A. Munro Sutherland, in seconding, said it was now quite well known that the shipbuilding programme had not turned out as it ought to have done. He could not understand why the Government should have minimised the necessity for the men to work by increasing their standard wages instead of giving them a bonus for work accomplished or putting them on piece-work.

Sir William Raeburn said that undoubtedly the chief reason for the small tonnage output was wages. The higher wages had resulted in a shorter number of hours being worked in a great number of yards. The Clyde had an unenviable notoriety and it was the fact that one or two extreme spirits had disorganised the whole of the work and terrorised the loyal men there. The Government knew perfectly well who the traitors were and some of them were deported, but with that leniency for which the Government was famous, they had allowed them back. Why did not the Government remove the canker from our midst? If they did, they would find themselves thoroughly supported by the majority of the workers in the yards who were perfectly anxious to get on with their work. He had made it his business for many months to visit yards in order to hurry up work, but the employers had no more say in the management of their yards than he had. There was constant interference by Government officials and as long as the control was taken out of the hands of the employers and placed in the hands of irresponsible people, this state of affairs would continue. At one time shipbuilding was in the hands of a department of the Admiralty, but it was wisely taken away and placed in charge of the Shipping Controller. He believed, however, that it had now gone back to the Admiralty, but the sooner it came back to the Shipping Controller the better. Although there was no more important matter before us than shipbuilding there was no reason to get panicky. January was no criterion. Weather was now better and material was coming forward better, and if the Government would only do what the shipowners were beseeching them to do, take the public into their confidence and give figures of the tonnage of sinkings and of the replenishments and let us know from week to week how we really stood, we should get along better, as the public would then be able to appreciate the true position. The truth had been hidden too long.

State Ownership of Merchant Shipping.

That as efficient and economical transport is of vital consequence to British industries, the Chamber desires again to impress upon the Government that State control of the mercantile marine should be discontinued at the earliest possible date.

Mr. J. H. Scrutton said that notwithstanding the remarks already made on this subject by Sir William Raeburn, he thought it necessary to keep the question before the public. Those who argued in favour of State control did not know where their bread and butter came from. The shipowners had no need to be afraid of their record. British shipping was 48 per cent. of the world's total and 90 per cent. of it was ocean going. Of that, 48 per cent. was built since 1905 and therefore was quite modern and efficient. Let the private owners have their ships and a chance of building more and the British community need have no fear as to the charges which would be made for the carriage of their goods.

Sir William Cory said the members of the Chamber were only too anxious that the control of their business should be handed back to them as speedily as possible.

Double Income Tax.

That the Government should take immediate steps still further to ameliorate the position as regards colonial taxation and to relieve shipowners and others, the nature of whose business involves their trading abroad, of the burden of taxation in foreign countries which will otherwise constitute a severe handicap to British overseas trade.

Mr. Oswald Sanderson said this matter had always been a thorn in the side of the shipping trade. He suggested that the Chamber should indicate in the resolution its willingness to assist the Treasury with the best advice at its disposal in order to arrive at a fair system of taxation.

Mr. Howard Houlder, seconding, urged the importance of the matter at the present moment because the United States and the Colonies had recently adopted the principle of the direct taxation of incomes and if anything was to be done it should be done quickly, before any stereotyped system was adopted in other countries. An international arrangement should be come to whereby the profits on ships should be taxed only in the country in which they were owned. That would be the best solution.

Reconstruction.

(A) That this Chamber of Shipping of the United Kingdom do forthwith apply for incorporation by Royal charter to be applied for shall be in the form of the draft signed by the President Elect and now before the meeting, with such modifications, if any, as shall be approved by the President and Vice-President for the ensuing year: that the incorporated Chamber shall, as provided in the said draft charter, be governed by bye-laws, and that such bye-laws shall be in the form of the draft bound up with the said draft charter, with such modifications as shall be approved by the President and Vice-President, provided that if any modifications in the form of the charter of bye-laws involve a matter of principle, they shall be submitted to the Council of the Chamber before such approval is given.

(B) That a new Council shall forthwith be elected in accordance with the new scheme provided in the said draft bye-laws, and that from the date hereof such draft bye-laws shall be adopted as the regulations governing the Chamber.

Sir William Raeburn proposed this resolution and Mr. Arthur Cook seconded.

A vote of thanks to the President, proposed by Sir Walter Runciman, Bart., M.P., and seconded by Sir Thomas Lane Devitt, Bart., who mentioned that the Prime Minister was well aware that something must be done to increase the shipbuilding output, closed the meeting.

WAGES IN THE ENGINEERING, FOUNDRY AND SHIPBUILDING TRADES.

In pursuance of an agreement between the Engineering Employers' Federation and various Trade Unions, providing for a review of wages in the engineering and foundry trades every four months during the war, the Committee on Production heard the parties on February 27, 1918, when several applications for increased wages of varying amounts were submitted. Similar applications had been made by workpeople employed in the shipbuilding trade, and these were heard on the same date.

By previous awards of the Committee on Production, the men concerned have received advances over pre-war rates of not less than 20s. a week in the case of plain timeworkers, and 13s. a week, plus an increase of 10 per cent., on piece prices, in the case of pieceworkers.

In addition to these advances, earnings have been increased by grants of a bonus of 12½ per cent. in the case of plain timeworkers, and 7½ per cent. in the case of pieceworkers and other workmen how are not paid at plain time rates.

The award of the Committee (made March 5, 1918) is that conditions at the present time do not warrant any further general alteration of wages.

THE PRINCE OF WALES' TOUR OF THE CLYDE SHIPYARDS.

In our previous issue we referred to the visit which the Prince of Wales made last week to the shipyards and engineering establishments in the Clyde district, where he was everywhere received with an enthusiastic welcome. He took the keenest interest in everything he saw, and expressed himself as having been delighted with his visit.

The first illustration which we reproduce on page 295 shows the Prince and party (including Lord Aberconway, Lord Pirrie, Sir William Ellis, and Mr. John Samson) in the yard of John Brown & Co.; the second illustration shows the Prince with a pneumatic riveting hammer driving a white-hot rivet into a plate of a standard ship on the stocks in the yard of Dunlop, Bremner & Co., which he said was not such an easy job as it looked at first.

The Prince of Wales and Party in the Shipyard of John Brown & Co., Ltd., at Clydebank.

The Prince driving a Rivet into a Plate of a Standard Ship in the Yard of Dunlop, Bremner & Co., Ltd., at Port Glasgow.

FROM OUR CORRESPONDENTS.

CLYDE DISTRICT.

(From Our Own Correspondent.)

Clyde Trust's Provisional Order.—It appears that the Provisional Order which is being promoted by the Clyde Trustees is likely to meet with considerable opposition. Should the measure become law it will, among other things, empower the Trustees to raise the scale of dues chargeable on shipping at Glasgow Harbour. Petitions have been lodged against the Order by a number of objectors, including the Clyde Steamship Owners' Association, the principal Scottish railway companies, and certain firms engaged in the coal and iron trades. Certain of the petitioners have applied to the Board of Trade to have the hearing postponed till after the war, but the Trustees have decided to press the Board to allow the Order to proceed.

Management of Glasgow Harbour.—The appointment by the Clyde Trustees last week of a new committee for dealing with urgent and important matters which may arise marks a new development in the method of dealing with questions relating to the management of the affairs of the port. In the past all such questions were referred to the Committee of Management, which includes all the members of the Trust. Since the war broke out this committee has been found rather unwieldy for dealing with matters of urgency, and it was therefore decided to appoint a smaller but thoroughly representative group of members to be known as the General Purposes Committee for dealing with questions of policy and business of importance and urgency and to report to the Committee of Management. The new committee consists of the chairman and deputy chairman of the Trust, the Lord Provost of Glasgow, who is *ex officio* a member of the Trust, and the conveners of Standing Committees. The Chairman of the Trust has been appointed convener of the General Purposes Committee, and the deputy chairman subconvener.

The Shipbuilding Output.—The statement of the First Lord of the Admiralty with regard to the output of new shipbuilding forms the chief topic of discussion in shipbuilding circles on the Clyde. The reply of the Shipbuilding Employers' Federation and the Shipyard Trade Unions is dealt with elsewhere, but it may be pointed out that the opinions expressed in the official statement are not universally endorsed by responsible workers in the shipyards. It is stated locally that the output has fallen off to an appreciable extent since the abolition of the clearance certificate. Under that system a man who was slacking could be reprimanded, and if that was not effective he could be taken before an impartial tribunal, and if guilty fined. Now that he is at liberty to give up his job, and if adversely criticised, the workman simply informs his foreman that if he is not satisfied with him he will give notice and clear out. Managers and foremen, not being able to fill the places of these inefficient workers, have not infrequently to shut their eyes to a certain amount of slacking. Another reason for the shortage in output is said to be the percentage basis of payment which in some case may lead to indifferent supervision. The percentage on wages and material payment, it is held in certain quarters, is extravagant and demoralising and should be stopped. The Government ought to have in their possession now sufficient data to contract for so much per ton as formerly, and that system, with a bonus for quick delivery, it is believed would bring about better organisation, and retain the correct reward of payment by results. Other improvements suggested are greater simplicity in design, and the avoidance of alterations during the currency of contracts.

NORTH-EAST COAST DISTRICT.

(From Our Own Correspondent.)

Clyde and Forth Canal.—The Leith Dock Commission has been in communication with Newcastle Chamber of Commerce respecting the proposed Clyde to Forth Canal, intimating that in the opinion of that authority the canal should not be undertaken without great consideration. The canal should not be undertaken, it was urged, from any false idea of commercial prospects, and only on grounds of national necessity. The commercial prospects of and the revenue to be derived from the project ought to be the subject of a public inquiry as apart from the strategic aspects of the proposal. The Newcastle Chamber did not debate the merits of the scheme, but contented itself by agreeing to back up the Leith Dock Commission in its recommendation for an exhaustive inquiry.

Miners in Shipyards.—A proposal to augment the labour in the shipyards on the north bank of the Tyne from among the miners in Northumberland has been helped very considerably by the fact that one pit closely adjacent to several shipbuilding establishments is to be closed. The closing of the colliery will release about 540 men and lads, but of that number perhaps a hundred will be retained by the owners to keep the plant in order against some future time when coal-drawing may be resumed. Taking the old and young together there will be nearly 400 miners available for drafting into the local shipyards, and the preliminaries have already been arranged between the Coal Owners' Association, the Miners' Association and a Government representative. When all or most of these men are absorbed, and should more miners be still required from the Northumbrian pits for the shipyards, there will be a further meeting of the employers and men's representatives.

Funds for Commercial and Trade Department.—At the last meeting of the Newcastle Chamber of Commerce the hope was expressed that the Treasury would not hesitate to grant the necessary funds to make the new Commercial and Trade Department as efficient as possible. The Department is being organised under the direction of the Foreign Office and the Board of Trade, and the secretary of the Chamber (Mr. Herbert Shaw) pointed out that it was intended to develop our foreign trade and to see that the competition of our commercial rivals was properly met. The need had been realised, he said, of a very definite system of commercial penetration of foreign countries after the war. It was necessary under modern conditions that we should have up-to-date information about ordinary questions concerning the selling of goods—whether our goods were as acceptable as other people's, whether they were the goods required and whether the quotations were made in the proper currency. The Consular Service was under full consideration at the present time, as also was the whole question of the commercial attaché service.

Richardsons, Westgarth & Co.—Another attempt is to be made to adjust the capital of Richardsons, Westgarth, Ltd., Hartlepool Engine Works, to what are deemed immediate requirements. Recent meetings of the company ended in a deadlock, and shareholders afterwards formed a committee and drafted a scheme, which will be considered at a meeting of the shareholders at the Queen's Hotel, Leeds, on Friday, March 15, at 3.15. A circular by the committee referred to submits the following scheme as fair to each class of shareholders, preference and ordinary: That the ordinary shares be reduced to 8s. each; that the preference shares be reduced to 16s. each; that the preference shares continue to be cumulative as regards dividend with priority as to capital and dividend; that the rate of dividend on the preference share capital as so reduced be increased to 7½ per cent. (this will give the same return on the reduced amount of 16s. as 6 per cent. gives on £1); that one half of the accumulated arrears of preference dividend to April 30, 1918, be cancelled, and that after December 31, 1917, the surplus profits of the company in each year after providing for debenture interest, depreciation, directors' fees and 7½ per cent. on the reduced preference share capital be divided between preference and ordinary shareholders proportionately to their respective reduced capital, that is two-thirds to the preference and one-third to the ordinary, until the whole of the remaining half of the accumulated arrears of preference dividend to April 30, 1918, has been discharged, after which such surplus profits will belong to the ordinary shareholders. It is considered that this scheme "will remove many difficulties in the way of the company and enable it to commence paying dividends at an early date."

THE MERSEY DISTRICT.

(From Our Own Correspondent.)

War Risk Insurance Rates.—Anent the leakage of the news of certain Liverpool operators in the Liverpool cotton market regarding the change in Government war risk insurance rates, the Liverpool Cotton Association have taken prompt measures to prevent anything of a like nature happening again. They have pointed out that it is essential that Government information regarding changes of rates affecting the importing of cotton should be communicated to them before it is allowed to reach others through private channels. It appears that the news was officially communicated to the Underwriters' Association in London, but that it did not occur to the authorities that the Liverpool Cotton Association should be informed.

Warehouses at the Docks. The lack of warehouse accommodation which the war has disclosed at the port of Liverpool has been

promptly taken in hand by the Mersey Dock and Harbour Board, and two huge three-storey warehouses are now to form part of the equipment of the Gladstone new docks, instead of the two-storey sheds already provided for. On the tongue of land which will divide the Gladstone Dock No. 1 from the Gladstone Dock No. 2, that is on the north quay of the former, and the south quay of the latter, are to be erected two large warehouses each 1,302 ft. long and 100 ft. wide, which together will have a total area of 86,400 yards, and as the roofs will be flat and designed to take rough cargo an additional storage space of 26,000 square yards will thus be provided, making a total area for both sheds of 112,400 square yards. These sheds, moreover, are to be set back 18 ft. from the quay side so as to enable a large vessel very high out of the water to discharge on to the lower floor, and to permit of railway lines being laid down between the sheds and the ship, if in the future it is found the amount of traffic going direct by rail is increasing. This is an important feature in the design of these new sheds, and if proper railway connections are made eventually with the railway goods depots, should greatly facilitate the movement of inward and outward traffic, and save the delay and expense of handling the traffic through the dock sheds. Another provision these new sheds are to have is electric travelling roof cranes for delivery into railway wagons. There will be eight 30-cwt. such at each shed, and in addition four 20-cwt. movable electric cranes at each shed for loading off purposes on the roadside.

The Docks Board at their meeting on Thursday also decided that in consequence of the increased cost of wages and materials the charge for the general use of the cranes, both on shore and afloat, and of the coaling appliances at Liverpool and Birkenhead would, as from April 2, be increased by 50 per cent. on the existing charges.

SOUTH WALES DISTRICT.

(From Our Own Correspondent.)

Trade of Swansea Harbour.—The official returns of the Swansea Harbour Trust show that imports last month totalled 29,594 tons and exports amounted to 270,080 tons. In the corresponding month of last year the totals were 44,591 tons and 208,549 tons respectively.

Coal Consignment to French Ports.—It has been officially announced that, with the approval of M. de Lubersac, arrangements have been made whereby consignments to the French ports of Treguier, Paimpol, Lannion, Roscoff, and Abervrach shall be treated as ports in the St. Valery sur Somme/Morlaix group of the Schedule of Limitation of Freights (French ports) Order, 1918.

New Dry Dock for Swansea.—Important developments in regard to dry docks are about to take place at Swansea. Harris Brothers, Cambrian Dry Docks, have now completed plans for the construction of a double dock at the Pill, South Dock, and work will be commenced immediately, in the hope that the contract will be completed by the autumn. The plans show that the dock is intended to be 400 ft. long, and capable of dealing with a 10,000 ton ship and a 3,000 ton ship side-by-side.

Seamen and Representation in Parliament.—At a mass meeting convened by the National Sailors' and Firemen's Union, held at Cardiff, Mr. J. Havelock Wilson explained the methods whereby sailors would be able to record their vote at a general election even if they were far away in a foreign land. He said there would be two candidates to represent the seamen for the Cardiff Parliamentary division, one would be from the Merchant Seamen's League and the other from the National Sailors' and Firemen's Union. There would be three members of Parliament for Cardiff, and as that city was looked upon as one of the greatest shipping ports in the United Kingdom, two of these should represent the seamen in the House of Commons.

The Coal Controller and Coal Exporters.—The recent Order of the Controller of Coal Mines, instructing coal exporters to hand over to the colliery companies the one-third of 5 per cent. brokerage on all cargoes shipped after March 2 is being resented by coal exporters in most localities. At Cardiff a special meeting of the Chamber of Commerce was convened to consider the matter, when it was explained that the Controller intimated to a deputation that waited upon him that he intended to adhere to the action taken by him. The Chamber decided to endeavour to get an interview with the Prime Minister in conjunction with other districts, and failing that to raise the matter in the House of Commons. At Swansea the Chamber of Commerce passed a resolution of protest against the action of the Controller, and also a further resolution that the exporters decline to pay over the brokerage to the collieries.

THE FREIGHT MARKETS.

(From Our Own Correspondents.)

London.—There is no abatement in the interest shown by charterers in tonnage available for homeward cargoes from the East and North America. All round rates rule very firm at the high level which has now been reached. From the River Plate rates are unchanged at 200s. to the United Kingdom and 205s. to France. The ports of the North American Atlantic seaboard require tonnage on net form of charter at 230s. to the United Kingdom, 260s. to France, and 330s. to French Mediterranean ports, while to West Italy 360s. is offered. Gulf loading is worth 30s. additional. For heavy grain 50s. is the current rate to the United Kingdom, 56s. 3d. to France, and up to 75s. to the Mediterranean. There is little or nothing doing in the carriage of coals from Virginia to the Plate, but good rates offer for general cargoes to South America. The Eastern demand is scarcely so strong, and probably 225s. represents the top rate from Karachi to this country on scale basis. On d.w. Bombay offers 240s. to 250s. to same destination, and about 400s. to the Mediterranean. From Calcutta it is possible that 800s. could be obtained to the Mediterranean. From the Madras Coast to Marseilles 550s. is the value of kernel cargoes, and the rice ports of Saigon and Burmah would pay 500s. to the United Kingdom or France. Salt cargoes could be worked at 90s. from Torrevieja to Chittagong or 45s. from Port Said to Calcutta. From the ore and phosphate ports of the Mediterranean vessels are being taken up on the basis of 45s. Huelva to the Mersey, 60s. Huelva to the East Coast, United Kingdom for pyrites, 50s. Bougie to the Clyde, 65s. Tunis to the Clyde, and 50s. Bilbao to Boulogne. Bay business is indicated by fixtures at 20s. Bayonne and 17s. Bordeaux to Bristol Channel.

Glasgow.—The amount of business done on the Glasgow market during the week has been small owing to the shortage of tonnage, and the rates as a rule were firm all round. The following were among the fixtures reported:—Bayonne, 800, 1,800, and 1,500, Bristol Channel, 20s. prompt; Bordeaux to Bristol Channel, 17s.; States and West Indies, 3,000, 2,700, and 3,200, 35s. one round trip, delivery and re-delivery, States, March; time charter, New York and West Coast South America, 40s. one round trip, prompt delivery; Fowey to Portland (Maine), 30s. china clay.

Newcastle-upon-Tyne.—Employment at local collieries has been progressively good, by reason of a keen official demand accompanied by the provision of the requisite transport facilities. Northumberland steam coal collieries have, as in immediately previous weeks, received most of the benefit, but even Durham gas coal-pits have been appreciably helped. Apart from the requisitioned tonnage supplies, however, the market has been starved for cargo space. Exceedingly few neutral vessels have been on offer and, for these, such high rates have been asked that merchants have set their faces against payment. Only three fixtures of vessels are reported on the open market, and all these are for Scandinavia—Drontheim, 1,250, 140 kr.; Gothenburg, 2,100, 155 kr.; and Stockholm, 2,600, 162½ kr. The Drontheim rate, it will be observed, is unaltered, that for Gothenburg shows some ease on the week, and that for Stockholm is weaker. There is any amount of business on offer for other directions, but "no takers." The French Coal Export Committee has a fair number of requisitioned vessels for loading with coal and coke for French Atlantic ports. The Spanish Atlantic is nominal at 180s. for Bilbao or Santander, but the market has not been tested for weeks. Portugal is in the same position, with 115s. still quoted for Lisbon, and 125s. for Oporto. The coaling stations are steady at 100s. to Gibraltar, and 200s. for Port Said. The Spanish Mediterranean is inclined to strengthen, but shippers are holding out against paying any higher rate than 440s. for Barcelona discharge. Coasting business is still conspicuous by its absence.

Liverpool.—The freight position here is unchanged, and business being done is limited to the few boats that become available. Rates remain firm in the controlled trades, but neutrals would pay more to fix at the coal ports. The inquiry for time charter tonnage still exceeds the supply, and neutrals again competing would pay up to 58s. for short periods. British rates, however, are unchanged, and with suitable boats scarce chartering rules quiet. Homeward freights are generally quiet, though there is some activity in the North American trade for net charters, which are being arranged on basis of 230s. to Liverpool, 260s. to the French Atlantic, and 360s. to West Italy. Grain is being fixed at 50s. from Range ports to the United Kingdom, 56s. 3d. to French Atlantic, and 75s. to

Italy. Eastern markets are still without tonnage and parcels per liners are offering at 550s. Saigon to France, 500s. Burmah to London or Liverpool, 275s. from Bombay, and 250s. from Karachi to home ports. River Plate quiet to this country for wheat, but 200s. still offering for neutrals. Nitrate ports quote 180s. to United Kingdom.

Cardiff and Swansea.—The outward coal freight market continues dull and featureless, owing, mainly, to the short supply of tonnage. The business concluded has been mainly for the limitation ports. The authorities have been fairly well placed as regards tonnage, and it was reported that carrying space had been allocated for South American destinations. The only transactions disclosed were: Brest, 45s. (neutral); Caen, 48s. (neutral); St. Malo, 21s. (Allied); Havre, 45s. 9d. (neutral); Rouen, 48s. 9d. (neutral); Bordeaux, 69s. (neutral); Treguier was done at 90s. for a small sailing vessel. Dakar was again fixed at 90s. 9d. for fuel. Inquiries continue in circulation for Spanish ports, but no business has been reported owing to the high rates demanded. On the Swansea market orders were circulating very freely for all directions, but business was chiefly confined to French ports, where, owing to the scarcity in tonnage supplies, no difficulty was experienced in obtaining the maximum schedule rates.

Hull.—The market has a firm tone all round and business is chiefly confined to the North French ports and to other Allied destinations. There is an active demand for tonnage, both for the French and the West Italian trades, but the scarcity is severe, and this retards operations on all sides. In the neutral markets business is seriously restricted through the lack of tonnage and the difficulty of procuring licences.

COMPANY REPORTS AND DIVIDENDS.

United Scottish Herring Drifter Insurance Company, Ltd.—The report states that the directors propose to pay a dividend at the rate of 7½ per cent., free of income tax, absorbing £690; writing down the value of Stock Exchange investments, £1,000; carrying forward, subject to directors' remuneration, £927.

Maritime Insurance Company, Ltd.—The report for the year ended December 31, 1917, has now been issued. To provide for depreciation in value of the company's investments as at the end of 1917, the directors have transferred the sum of £6,000 from profit and loss account. The company's holding of Government securities at the end of 1917 amounted to £606,400. An interim dividend of 10 per cent., less income tax, was paid on July 3 last, and the directors now recommend a further dividend of 15 per cent., less income tax, payable March 19, making 25 per cent. for the past year on the paid-up capital.

Penrikyber Navigation Colliery Company, Ltd.—The report for the year ended December 31, 1917, states that the profit, after providing for excess profits duty, &c., amounts to £32,556, which, with the balance from last account, gives a total of £58,886. From this has to be deducted the interim dividend paid in August last, leaving a balance of £40,135. The directors now recommend a dividend of 3¾ per cent. on Preference shares and 7½ per cent. on Ordinary shares, which, with the interim dividends paid, will make 7½ per cent. on Preference shares and 15 per cent. on Ordinary shares for the year, leaving £21,386 to carry forward.

British and Foreign Marine Insurance Company, Ltd.—The report states that the underwriting account for 1916, now closed, has resulted in a profit of £410,893, while the interest account for 1917 realised £111,735. The sum of £357,074 was brought forward, and after deducting income tax on 1915 account, there is at credit of profit and loss £641,856. An interim dividend of 20s. per share has been paid, and a final dividend of that amount is now proposed, which will leave £541,037 to carry forward. Premiums for the last year amounted to £1,165,323, and claims settled to £294,954, leaving a net balance, after deducting expenses, of £782,503.

Globe Shipping Company, Ltd.—The annual report states that the accounts for the year ended December 31, 1917, show a profit on trading, after providing an adequate amount for excess profits duty and contingencies, of £15,171. After paying directors' fees and incidental expenses and placing £4,500 to reserve for depreciation, there remains £10,042, to which must be added £633 brought forward, making a total of £10,675. From this must be deducted the amount of interim dividends paid in August and November last, absorbing £6,750, leaving at disposal £3,925. The directors recommend a final dividend of 10 per cent., making 32½ per cent. for the year, leaving £925 to carry forward. The dividend for the year of 32½ per cent. compares with 25 per cent. for the previous year. The profits and dividends for the past three years are as follows:—

Year.	Profits. £	Ordinary dividend. Per cent.
1915 ...	[illegible]	22½
1916	[illegible]*	25
1917	16,791*	32½

* After providing for excess profits tax, &c.

Celtic Collieries, Ltd.—The directors in their report for the year ending December 31, 1917, state that the profits, after adding amount brought forward and deducting interest on debentures, amount to £26,405, which they propose to deal with as follows: interim dividend on ordinary shares for half-year ended June 30, 1917, at 10 per cent. per annum paid July 16, 1917, £5,750; interim dividend on cumulative preference shares for half-year ended June 30, 1917, at 7 per cent. per annum, paid July 16, 1917, £4,025; final dividend on ordinary shares at 10 per cent. per annum for half-year ended December 31, 1917, £5,750; final dividend on cumulative preference shares at 7 per cent. per annum for half-year ended December 31, 1917, £4,025; balance to carry forward, £6,855. The directors have consolidated the reserves previously created with the general reserve, which now stands at £67,198.

COMPANY REGISTRATIONS.

General Marine Underwriters' Association, Ltd.—Capital £50,000, in £1 shares. Objects: as indicated by the title. Signatories:—

H. M. Liston, 37, Walbrook, E.C., clerk.
W. Rose, 57, Roxwell Road, Shepherd's Bush, W., clerk.

The first directors are to be appointed by the subscribers. Qualification, £250. The directors may borrow up to £100,000 without the sanction of a general meeting. Private company.

Woodend Steamship Company, Ltd. Capital, £14,000, in £5 shares. Objects: Shipowners, engineers, sail makers, rope, twine and sail cloth manufacturers, ship chandlers, and manufacturers of and dealers in all kinds of apparatus, machinery and goods in connection therewith, &c. Signatories:—

Alfred Cooper, 36, Fairfield Road, Widnes, clerk.
J. H. Cooper, Heme Bay, Derby Road, Farnworth.
[illegible] The Mount, Castle Northfield, shipbroker.
Arthur Cooper, 120, Mersey Road, Widnes, mineral water manufacturer.

The first directors are: J. H. Cooper and Arthur Cooper. Registered office: St. Mary's Road, Widnes. Private company.

France Fenwick, Tyne and Wear Co., Ltd.—Capital, £100,000, in £1 shares. Objects: To purchase, charter, hire, build or otherwise acquire, own and work tugs, barges, lighters and vessels, to buy, sell, prepare for market, and deal with and in coal, oil fuel, merchandise and produce, &c., and to enter into agreements with (*a*) Wm. France Fenwick & Co., Ltd., and (*b*) the Sunderland Towage Company, Ltd., and J. E. Dawson, the liquidator thereof. Signatories:

H. C. Pelly, 5, Fenchurch Street, E.C., shipowner.
J. E. Dawson, 21, Bridge Street, Sunderland, shipowner.

The first directors are to be appointed by the subscribers. Remuneration as fixed by the Company. Registered office, 21, Bridge Street, Sunderland. Private company.

Barnett Bros., Ltd.—Capital, £10,000, in £1 shares. Objects: To take over the business carried on by Barnett Bros., at Exchange Chambers, St. Mary Axe, E.C., and to carry on the business of shipowners, shipbrokers, charterers of ships and vessels, ships' husbands, freight contractors, forwarding agents, &c. Signatories:—

B. G. Barnett, 24, St. Mary Axe, E.C., shipbroker.
A. M. [illegible], Exchange Chambers, St. Mary Axe, E.C., shipowner.
F. W. [illegible], 24, St. Mary Axe, E.C., shipbroker.

Permanent governing director, B. G. Barnett. Special qualification £500. Registered office, Exchange Chambers, St. Mary Axe, E.C. Private company.

S. A. Williams, Ltd.—Capital, £2,000, in £1 shares. Objects: Shipping, customs and forwarding agents, steamship owners and brokers, stevedores, exporters of, dealers in and agents for coal and fuel, &c. Agreement with S. A. Williams. Signatories:—

W. [illegible], Dock Chambers, Barry Docks.
F. D. [illegible], Dock Chambers, Barry Docks.

The first directors are to be appointed by the subscribers. Registered office, Dock Chambers, Barry Docks. Private company.

QUESTIONS IN PARLIAMENT.

Transfer of Labour to Shipyards.

Mr. Shaw on March 6 asked the Under-Secretary for War whether a new Army Council Order or Instruction had been issued, the effect of which was to prevent commanding officers from forwarding applications from men who were shipworkers and desired transfer from the Army to the shipyards.

Mr. Macpherson: No, sir; so far as I can ascertain no such Instructions have been issued by the War Office.

Loss of Two Convoyed Ships.

Mr. G. Lambert on March 6 asked the Secretary to the Admiralty whether precautions had been taken, as far as possible, to prevent a recurrence of the events that led to the sinking of two ships in the convoy that left Falmouth on December 26 last.

Dr. Macnamara: Full inquiry has been made into this case. Whilst, of course, I cannot promise immunity from attack, I can assure my right hon. friend that steps have been taken, arising out of certain incidents in this case, which, it is hoped, will prevent their recurrence.

Dublin Harbour Dues.

Mr. Byrne on March 6 asked the Secretary to the Treasury whether his attention had been directed to the correspondence between the solicitor to the Corporation of Dublin and Mr. L. Chubb, secretary of the Dock and Harbour Dues Claims Committee, on the subject of the ancient dues received by the corporation from all ships except His Majesty's warships coming into the River Liffey, of which the committee had refused to take recognisance owing to a Treasury ruling to the effect that the concession in respect of dock and harbour dues did not apply to such claims, and that payment should not be allowed; whether he was aware that the right of the corporation to these dues was based upon the ownership of the bed and soil of the river conferred upon the corporation by various Royal charters of King John, King Henry III, and other sovereigns, and that they were claimed only as against ships in Government hands other than warships; whether he was aware that the amount now claimed by the corporation in respect of these dues upon vessels in the service of the Crown other than warships was £180; and whether he would make representations to the Treasury with a view to having an *ex gratia* grant of this sum made to the corporation, and having directions given that similar claims arising in the future should be similarly dealt with.

Mr. Baldwin: I have not seen the correspondence referred to. But I understand that no services are rendered by the corporation in respect of the dues claimed by them under the charters, and I have therefore not felt able to authorise any *ex gratia* payment in respect of Government ships.

Irish Lights Commission and its Employees.

Answering Mr. Byrne, who asked on March 6 for particulars of increases of wages paid to the employees of the Irish Lights Commission, including crews of steamers, Mr. Wardle (Parliamentary Secretary to the Board of Trade) wrote: The Board of Trade sanctioned the payment to lighthouse-keepers, the clerical staffs of the head office, the offices of the steam vessels and certain employees at Kingstown of war bonuses similar to those payable to civil servants under the Treasury circular of December 24 last and the relative awards of the Conciliation and Arbitration Board. Sanction has also been given to the payment to the crews of the steam vessels and the officers and crews of the light vessels of a war bonus of 3s. 5d. per diem and of a "danger money" allowance of 5d. a day.

Irish Canals.

In reply to Mr. Byrne, who asked on March 7 what steps had been taken by the Irish Canal Committee to make the system of inland navigation in Ireland available for agricultural produce and other goods which did not require rapid railway transit, Sir Albert Stanley, President of the Board of Trade, said: The canals in Ireland, which are under the control of the Board of Trade, have been placed by the Canal Control Committee under an Irish sub-committee. The sub-committee consists of the following members: Sir George A. Stevenson, K.C.V., C.V.O.; Sir John Purser Griffith, M.Inst.C.E.; Right Hon. Jonathan Hogg; Mr. W. R. Rea; Right Hon. Laurence Waldron. The canals under the control of the Committee are open and available for the carriage of agricultural produce and other goods which do not require rapid railway transport. Three of the five members are not connected, so far as I am aware, with any Government Department or Irish railway. It is not proposed to increase the number of members of the sub-committee.

The Sinking of the "Glenart Castle."

Major Hunt on March 7 asked the Under Secretary for the Home Department whether, in view of the fact that Commander Sir Edward Nicholl intimated at Newport, Montgomeryshire, that the sinking of the *Glenart Castle* was brought about by aliens in the docks and that there were spies in every port in the Bristol Channel who communicated with German submarines, he would take steps to prevent any alien from entering any docks.

Mr. Brace: I am not aware of the ground on which the statement reported to have been made by Sir Edward Nicholl is based, but my Department is in communication with the Admiralty on the subject. In the meantime, I may say that enemy aliens are generally excluded altogether from the areas in which docks are situated, and that the admission to the docks is regulated not by my Department, but by the naval and military authorities. Aliens forming part of the crews of allied or neutral ships cannot be altogether excluded from the docks, but they are not allowed to land unless they come from friendly ports, and then only on conditions which are strictly enforced.

Major Hunt: Is the hon. gentleman aware that Sir Edward Nicholl stated that he was in a position to know all about this, and that it was true? If it is not true, will the hon. gentleman have the paper which published it prosecuted?

Mr. Brace: As I have explained, we are in communication with the Admiralty upon it, and I can add nothing on the subject.

Mr. R. McNeil on March 11 asked the Secretary to the Admiralty whether his attention had been called to a speech delivered at Newport last week by Commander Sir Edward Nicholl, Royal Naval Reserve, president of the Seamen's League, in which he stated that he was prepared to say that the German submarine which sank the *Glenart Castle* knew she had left Newport, and that there were spies in every port in the Bristol Channel; whether, in view of the fact that this officer declared that he spoke as examination officer for the Bristol Channel, through whose hands many thousands of vessels had passed, his demand that aliens should not be allowed to enter the docks would be complied with; and what steps did he propose to take to remove the danger referred to.

Dr. Macnamara: My attention has been called to the utterances referred to. Sir Edward Nicholl is being asked for an explanation of his statements. If the statement is true that there are spies in every port in the Bristol Channel it was certainly Sir Edward Nicholl's duty to report the fact to his superior officer with all the information in his possession. The circumstances of the docks at Cardiff are well known, and are constantly engaging attention on the part of the local naval and military authorities and the Home Office, and are at the present time receiving consideration. My hon. friend may rest assured that every practicable procedure is being adopted for reducing the danger from the presence of aliens in the port.

Standard Ships.

Major Chapple on March 7 asked the Parliamentary Secretary to the Shipping Controller whether he could give an assurance that, in the building of cargo ships, no time or labour was wasted on accessories or equipment or paint or accommodation not absolutely and urgently necessary to their immediate function and safety at sea, but that only shells suitable for cargo purposes were being constructed with the necessary driving power and rough accommodation for the crew.

Sir L. C. Money: I gave my hon. friend the assurance for which he now asks on December 4 last, and I have pleasure in repeating it. The standard ships are being built as efficient cargo carriers, with the necessary accessories and accommodation and provision for safe navigation, and nothing is being put into them which is not considered essential for the purpose for which they are built and for the safety and comfort of the crew.

Import of Apples.

Answering Mr. Watt, who on March 11 asked whether the Ministry of Shipping had made any provision for bringing over from America, when suitable vacant cargo space could be found, a supply of apples, Sir L. C. Money said: Under present conditions apples could only be carried as a result of a deliberate decision to exclude other classes of cargo which are held to be more urgently required.

Weighers' Pay in Surrey Commercial Docks.

Captain Carr-Gomm asked the President of the Board of Trade on March 11 whether he was aware of the fact that the permanent weighers in the Surrey Commercial Docks had been unable to obtain the overtime pay and pay for Sunday work granted recently to other transport workers, and had been on several occasions asked

by the dock officials to accept compensation leave in lieu of overtime pay, which they refused to agree to; and whether, in view of the fact that these permanent weighers had an average of 30 years' service and were only 11 in number, he would take action in order to meet their case.

Sir Albert Stanley: I am informed that the overtime pay and pay for Sunday work to which the hon. member refers was granted by the Port of London Authority to labourers only. The weighers do not come under the category of "labourers" in the Authority's classification of their employees, but are members of the Lower Division Staff who do not receive payment for overtime, but are allowed compensation leave instead. The matter is not one in regard to which the Board of Trade possess any powers.

Shipbuilding in Private Yards.

General Croft, on March 12, asked the Secretary to the Admiralty whether his attention had been called to recent articles in the press on the subject of the present position in respect to steamer tonnage; and would he say what immediate steps he proposes to take to grant every facility for private enterprise to develop its resources in the extension of existing yards and the laying out of new sites for shipbuilding purposes.

Dr. Macnamara: Yes, sir, I have read very many of the articles which have recently appeared in the press on the question of new merchant tonnage output. As to the second part of the question, my hon. friend might read the First Lord's speech on introducing Navy Estimates on Tuesday last, and several references of my own on the question of extending facilities for output in existing yards, which I made on Wednesday and Thursday of last week. I might add that I spoke of new schemes sanctioned for the development of private yards and shops up to February 6 as numbering 136. The number of schemes which have now been sanctioned amounts to 147.

Sir W. Rowan Thomson's Resignation.

Mr. Mackinder, on March 12, asked the Secretary to the Admiralty if he would state the date Sir William Rowan Thomson resigned his position as director of auxiliary ships' engines in the department of General Collard; and what were his reasons for resigning.

Dr. Macnamara: Certain changes were decided upon as necessary in order to promote efficiency in the production of merchant ships, and an assistant deputy controller of auxiliary shipbuilding was appointed with special responsibility for progress of complete ships—both hulls and engines—in private shipyards. Sir W. Rowan Thomson, the Director of Auxiliary Ships' Engines, was of opinion that marine engineering should be dealt with independently from the hulls, and that the changes might prejudice the marine engineering side of the work. He resigned his position on February 15, and his resignation was accepted with regret. It need scarcely be said that the decision to appoint an assistant to the Deputy Controller with responsibility for progress of both hulls and engines is due to a desire to avoid any hiatus between the production of hulls and engines respectively, and involves no lack of recognition of the relative importance of marine engineering compared with shipbuilding.

Shipbuilding Appointments.

In the House of Commons on March 12 Mr. Mackinder criticised the policy of the alterations which had been made in the designs of standard ships and said that the effect was bad on both masters and men in seeing what they had put up pulled down.

Dr. Macnamara, in reply, said the changes had to be made in design to meet changes in the submarine campaign. He stated that Colonel James Lithgow, of Port Glasgow, was to be given complete charge of merchant shipbuilding—hulls and machinery—in private yards. Ship repairing and the construction of auxiliary vessels for the Navy had been transferred to Sir Thomas Bell, and this would enable General Collard to devote himself to the development of national shipyards, and to the emergency work required to extend existing private yards and engine shops.

PORT NOTES.

Port Phillip.—In connection with the arrangements adopted for navigating deep-draught vessels through the heads, advices from Australia suggest that a new aspect of the matter has arisen. According to the Ports and Harbours engineer, the entrance is not only 40 ft. deep for 1,000 ft. eastward of the line of leading lights, but is of a similar depth 300 ft. to the west of that line. In these circumstances, the Port Phillip pilots are to be asked to reconsider the position and to state whether they consider it possible to take 30-ft. draught vessels to sea without closing the port against inward traffic.

PRUDENTIAL ASSURANCE COMPANY, LTD.

The sixty-ninth annual report states that in the ordinary branch the number of policies issued during the year was 56,502, assuring the sum of £6,951,269, and producing a new annual premium income of £567,472. The premiums received were £5,495,205, being an increase of £265,035 over the year 1916. The claims of the year amounted to £4,852,409, of which £398,385 was in respect of war claims. The number of deaths was 14,629. The number of endowment assurances matured was 28,430, the annual premium income of which was £152,559. The number of policies including annuities in force at the end of the year was 934,075.

In the industrial branch the premiums received during the year were £9,376,858, being an increase of £479,135. The claims of the year amounted to £4,352,031, of which £1,109,240 was in respect of 65,665 war claims. The bonus additions including the claims amounted to £38,710. The total number of claims and surrenders, including 22,078 endowment assurances matured, was 402,635. The number of free policies granted during the year to those policyholders of five years' standing and upwards who desired to discontinue their payments, was 56,880, the number in force being 2,009,872. The number of free policies which became claims was 51,290. The total number of policies in force in this branch at the end of the year was 21,730,468: their average duration exceeds 13¾ years. The war claims of the year, in both branches, number 70,488 and amount to £1,507,625. The total paid up to the present on this account since the outbreak of war exceeds £3,400,000, in respect of over 160,000 claims.

In the general branch under the sickness insurance tables the premiums received during the year were £6,721, and £3,744 was paid in sickness claims. Sinking fund policies have been issued assuring a capital sum of £134,850 and producing an annual income of £2,663.

The assets of the company, in all branches, as shown in the balance sheet, are £107,283,371, which after deduction of the balance of £3,487,500 owing in respect of the advance from Bankers for purchase of War Loan shows an increase of £4,672,125 over 1916.

In the ordinary branch the surplus shown is £1,584,540, including the sum of £218,240 brought forward from last year. Out of this surplus the directors have added £400,000 to the investments reserve fund, which stands as at December 31, 1917, at £2,400,000, and £178,412 has been carried forward.

In the industrial branch the surplus shown is £616,260, including the sum of £184,530 brought forward from last year. Out of this surplus the directors have added £335,623 to the investments reserve fund, which after deducting £35,623 representing realised loss on investments, stands as at December 31, 1917, at £1,700,000, and £92,470 has been carried forward.

The total surplus of the two branches as shown by the valuation is £2,200,800, and £1,000,000 will be transferred from the ordinary branch contingency fund, thus increasing the surplus to £3,200,800. Of this amount £400,000 has been added to the investments reserve fund of the ordinary branch and £335,623 has been added to the investments reserve fund of the industrial branch, £1,794,295 will be allocated to participating policies in the ordinary branch and £400,000 to the shareholders in accordance with the Articles of Association of the company, leaving £270,882 to be carried forward, namely, £178,412 in the ordinary branch and £92,470 in the industrial branch.

During the past year over £1,100,000 was paid in war claims in the industrial branch, by far the greater part of which was in respect of policies which did not include war risk as a legal liability. In addition, the company's resources have been subject to the severe strain of the Courts (Emergency Powers) Act. These two causes of loss together amount to a much greater sum than that allotted in the pre-war year 1913 under the profit sharing scheme of the company.

The balance sheet includes over £27,250,000 in British Government securities; this represents an increase over last year of about £9,500,000.

The four Prudential Approved Societies have during the year paid to their members at their own homes benefits amounting to £1,303,380, making a total amount of £7,044,956 paid in this way since the commencement of our National Insurance work.

A striking feature of the year has been the large number of women admitted to membership, the number being 232,787 as compared with 92,298 males.

NEWS PARAGRAPHS.

German Steamship Piers in America.—A Central News message from Washington states that the President will ask Congress for immediate authority to take over the piers owned by German steamship lines in American harbours. The piers are principally at Hoboken and are largely the property of the Hamburg-America and North German Lloyd Companies.

The Navy League of Canada.—The General Secretary of the Navy League has received from Mr. W. G. Ross, President of the Navy League of Canada, the first monthly instalment of £2,000 for the promotion of Navy League activities. The Navy League of Canada has undertaken to subscribe £2,000 monthly in support of the work of the Navy League in the United Kingdom.

Deposit Accounts of the Prize Court.—A return issued as a White Paper of the Prize Court, &c., Deposit Accounts, shows that on March 31, 1917, the balance was £5,932,978. Vessels, freight and cargo condemned yielded £3,878,531, and proceeds of sale of cargo of vessels not condemned pending adjudication and release, and freight and cost of detention recovered, totalled £3,741,394. Total payments amounted to £3,504,653.

Restitution in Russia.—A sign of the times, and what is quite likely to be the first of a number of such announcements, is the following communication sent by the Rhederei A.G. von 1896 to *Hamburger Nachrichten*:—"Two of our vessels, the s.s. *Orissa* and the s.s. *Olga*, were seized by the Russians at Kronstadt and Odessa respectively at the beginning of the war. The *Olga* was torpedoed whilst in Russian service, but the *Orissa* is still in Russian hands and will therefore presumably have to be given back to us after the conclusion of peace [with Russia]."

Activity in Canadian Shipyards.—A steel ship of 8,800 tons, the first of a series of eight to be constructed at Vancouver for the British Government, under contracts placed by the Imperial Munitions Board, has been launched. The Board has placed contracts for 43 steel and 46 wooden vessels. Already a number of the latter have been launched. When the vessels being constructed for the Board are completed their places in the shipyards will be taken by ships to be built by the Dominion Government under the programme recently announced by the Minister of Marine.

Spies at the Docks.—Sir Edward Nicoll, Commander R.N.R., president of the Seamen's League, speaking at Newport (Mon.) last week, said he was prepared to say that the German submarine which sank the *Glenart Castle* knew she had left Newport, and he demanded that aliens should not be allowed to enter the docks. There were spies in every port in the Bristol Channel, and no vessel left any port unknown to the submarines at the mouth of the Channel. As examination officer for the Bristol Channel, many thousands of vessels having passed through his hands, he knew what he was talking about.

Operatives to show Indentures.—The Engineering and Shipbuilding Trades Central Advisory Committee (Operatives), which advises the Ministry of Labour on employment exchange questions affecting workpeople in those trades, at their sixth meeting considered a proposal that operatives seeking employment in highly-skilled trades should show their indentures, a record from their trade union, or a note from the employers with whom they served their time. The Committee unanimously accepted the principle and decided to invite the corresponding committee of employers' representatives to consider it in detail at a joint meeting.

121,000 Tons of New Shipping.—A Reuter message from Washington states that America's shipbuilding programme has been advanced by the completion and delivery during the month of February of 17 ships, with a total tonnage of 121,000. The Shipping Board officials estimate that during March 23 ships aggregating 188,000 tons will be delivered. Shipbuilding officials are positive that there will be a continuous increase each month until the apex is reached, and they cling to the expectation that shipbuilding in the United States will total 4,800,000 tons by January 1, 1919. By next year some officials believe that the shipyards will be working on a basis of 10,000,000 tons a year. Men and supplies are being sent forward to General Pershing according to the pre-arranged schedule. Another message puts the tonnage of the March programme at 221,000, and says that the total completed in January and February was 190,400.

War Risks on Cargoes.—The new scheme of Government insurance of cargoes against war risks came into operation on March 7. A scale of rates for different voyages replaces the present flat rate of five guineas per cent. for all voyages. An office for the purposes of the new scheme has been established at 53, Cornhill, London, E.C. 2.

Japanese Shipping.—One hundred and three new ships, aggregating 94,339 tons, were registered in Japan during the seven months ending July 31 last, while 140 ships, showing a combined tonnage of 80,746, were cancelled from registration for various reasons during the same period. When compared with the figure on December 31, 1916, there is a decrease of 37 vessels, but an increase of 13,583 in tonnage.

Business Men's Warning to Germany.—According to the New York correspondent of *The Times* the United States Chamber of Commerce reports the result of a preliminary canvass of commercial and industrial organisations throughout the country on the resolution to boycott Germany commercially after the war in the event of the German nation continuing to submit to a military Government. An overwhelming vote in favour of the resolution has been returned. As recorded so far the vote stands: 1,204 in support of the boycott; against, 154.

New Shipyard at Toronto.—The *Board of Trade Journal* states that a company at Toronto has leased 15 acres of land from the Toronto Harbour Commission as a site for a shipbuilding plant. The erection of the plant will be commenced in the near future, and it is understood that the new enterprise will be a large one. The capital of the company is $1,000,000. (United Kingdom firms interested may obtain particulars of the company referred to on application to the Department of Overseas Trade (Development and Intelligence) quoting the reference number "33.")

Tonnage for Cotton.—The delay in announcing the amount of tonnage which would be set aside in March for the importation of cotton has been generally interpreted as an unfavourable sign, and the fears to which it gave rise are now shown to have been justified. The following notice was posted last week in the Liverpool Cotton Exchange: "The Committee of the Liverpool Cotton Association regret that the Ministry of Shipping, having other more urgent claims on the available freight space, have been unable to make an allotment this month for cotton. It is, however, the intention of the Government to provide through the rest of the year tonnage sufficient to meet the requirements of the cotton trade at the reduced rates of consumption."

Home for Disabled Soldiers and Sailors.—Mr. J. W. Crosby, a West Hartlepool shipowner, has made a very munificent offer to provide a home for disabled soldiers and sailors belonging to the Hartlepools and district. It was conveyed in a letter to the Mayor of West Hartlepool in which Mr. Crosby said that in a letter left by his elder son, Jack, who was killed in action in France, he desired that the residue of his estate should be devoted towards alleviating the sufferings caused by the war. The amount, it was estimated, would be about £4,000, to which sum he (the father) personally was prepared to add another £6,000. With this sum of £10,000 Mr. Crosby suggested that a form of memorial be set up on the lines of the Lord Roberts Homes, and which would be partly self-supporting. A committee will deal with the project in the way desired, and there is no doubt that such a home would be greatly appreciated.

Irish Shipyard Workers' Wages.—The Committee on Production have issued their award in respect of an application made to the City of Dublin Steam Packet Company, the Naval Base, Holyhead, and the London & North Western Railway, by the Boilermakers' and Iron & Steel Shipbuilders' Society, and the Ship Constructors' & Shipwrights' Association on behalf of their members, for an advance of 10s. per week all round on their basic rate, the same to be retrospective from November 1 last. The application was not acceded to, and the matter was referred to the Committee on Production for decision. Representatives of the parties were heard on February 12. The differentiation between the Mersey rate and the rates paid by the employers concerned existed before the war. During the war, the men concerned have received advances on their pre-war rate of 21s. per week and upwards. The Committee having given careful consideration to the statements and arguments submitted to them, find that the claim of the Union for an alteration in the base rate has not been established.

Reederei Oceania A.G., Trieste.—Shares to the value of £167,000 have been issued at par, as part of the capital increase from £250,000 to £500,000.

French Shipyards. The Tréfileries du Havre, in conjunction with Le Creusot and the Soc. Normande de Métallurgie, are founding large shipyards. It is a case of quite new undertakings founded by works which deliver the building material.

Piombino Blast Furnace and Steel Works.—This concern, which is one of the largest ironworks in Italy, has raised its capital from £1,190,000 to £1,980,000 in order to establish a large shipyard for the construction of merchant vessels in the neighbourhood of Genoa.

Large Swedish Dry Dock.—The Finnboda yard has been given a State grant of £38,600 towards the estimated cost (£110,000) of a dry dock 460 ft. in length and 75½ ft. in width. The dock will be commenced this year and will be the largest on the east coast of Sweden.

Trollhatta Canal.—An attempt has been made to keep the canal free from ice and open to traffic all the winter. Traffic on the Gota canal has been interrupted, whilst that on the Trollhatta canal increases steadily. Seventy large steamships passed through the canal in November.

Constructora Naval, Reinosa.—This company contemplates considerable extensions, including the establishment of various new works for the manufacture of ship and armour plates. The capital is being raised from £2,390,000 to £2,590,000. Considerable difficulties have still to be overcome.

Japan's Need of Steel.—A Reuter message from Tokio states that the directors of seven Japanese shipyards, after holding conference, decided to offer to supply 1½ tons of shipping to America for every ton of steel dispatched therefrom. They are prepared to undertake to supply nearly 300,000 tons of shipping to America.

Volunteer Shipyard Workers in U.S.—It is officially stated that the United States Government has planned to provide comfortable homes for 250,000 volunteer shipyard workers and to protect them against extortion at the hands of private landlords. A $50,000,000 (£10,000,000) appropriation is available for housing schemes.

Increasing the Hamburg Fishing Fleet.—The Hamburg firm of Hoffman & Co. has ordered ten modern fishing steamships from the Reiherstieg Schiffswerfte u. Maschinenfabrik. These vessels are to be completed as soon as possible after the war, "so that they may contribute to German food supplies during the transition period."

Norwegian Losses in 1917.—The Norwegian official statement of merchant losses by submarines and mines is 434 vessels of 627,000 tons. The *Norges Handels og Sjofartstidende* estimates the Norwegian loss to be 477 vessels and 736,811 gross tons register, *i.e.*, 28·76 per cent. of the tonnage at the beginning of the year. The value of the lost vessels is placed at about £55,000,000.

Austrian Shipping in the Black Sea.—*Hamburger Nachrichten* announces that those Austrian shipping concerns whose vessels were seized by Russia on the outbreak of war, will now regain their vessels. Under the influence of the Ministry of Commerce a limited liability company will be formed to charter these vessels and use them for transport service to the account of the Ministry of War.

Australian Shipbuilding.—Mr. Hughes has announced that the Commonwealth of Australia will build three ships on Walsh Island. The dock at Cockatoo Island, Sydney, is being used for building warships. Two ships are being built at Williamstown, Melbourne, and one by private enterprise at Devonport, Tasmania. The South Australian Government is undertaking preliminary work towards shipbuilding. In addition, 14 vessels have been ordered in America.

South African Merchants.—At the annual meeting, in London, of the South African Merchants' Committee, it was decided to re-name the organisation "The South African Trade Association." The work of the mercantile marine was referred to in most eulogistic terms, one speaker remarking that for a year, although the ships had gone 6,000 miles out and home in all kinds of weather, and with submarines dodging about all round them, they lost none of their regular steamers.

Italian Prohibition.—By the law made last July any sale or transfer of ownership of Italian vessels to foreigners is forbidden for the duration of the war and one year thereafter. During the same period, no foreigner or foreign company can become sole or part proprietor of any Italian vessel or material for sea or harbour service. Only Italian subjects may own vessels flying the Italian flag, or be directors of Italian shipping concerns.

Danish State Ownership.—As already announced, the Danish Ministry of Commerce has ordered 10 similar motor-ships, each of 2,500 tons d.w., from Burmeister & Wain. The Government is lending its assistance in obtaining the necessary materials; the yard is to be extended in order that prior private orders may not be delayed; and the 10 vessels should be delivered in about 18 months' time. *Hansa* suggests that the Norwegian precedent of handing over the vessels to one or two existing owners will be followed so that the State ownership will not extend much further than providing capital for the construction of the vessels and accepting all risks of their operation. The primary use of the vessels will be to import goods which the State purchases abroad.

New German Yards.—The iron-construction and bridge-building firm of F. H. Schmidt (Hamburg-Wilhelmsburg) has converted itself into a limited liability company—the Elbe Werft A.G. (Hamburg)—with a capital of £220,000. The reconstructed company will establish a shipyard for vessels up to 5,000 tons on its Elbe sites. It is reported from several quarters that the Orenstein & Koppel group proposed to build a shipyard. According to one account the yard is to be built by the Lubecker Maschinenbau Gesell., without the provision of fresh capital. It is proposed to build a shipyard for sea-fishing vessels at Nordenham Einswarden, under the control of the banking house S. Bleichroder and various influential members of the fishing industry at Nordenham and Cuxhaven.

Elbe-Oder-Danube Canal.—A general meeting of committees from various bodies interested in the construction of the Elbe-Oder-Danube Canal (as part of a vast network of inland waterways in the Central Empires) was held recently in Prague to discuss the principal dimensions of vessels to be used on this waterway. Conclusions were reached and were referred to the central committee for ratification. The importance which is attached to this scheme is reflected by the names of those who participated in the discussion. The speakers included: Dr. Bubendey (Hamburg); Professor Engels (Dresden); Dr. Freymark (Breslau); Schneller, Bardas, Ebner, Suppan, Professor Halter (Department of Naval Architecture), Gebers & Klofetz (from Vienna); Professor Kresnik (Brunn); Doerfel & Fischl (Prague); Lerche, Beck, Demuth & Zulkowsky. The chairman was Hofrat Rippl (Prague).

"Transoceanica," Naples.—The interests represented by this company (which is established with £3,960,000 capital, and for the period up to August 31, 1967), are as follows: Sicula-Americana, £595,000; Navigazione Generale Italiana, £595,000; Italia, £1,390,000; Peirce Bros., £1,390,000. The paid up capital is £1,200,000 in cash and £780,000 as the value of vessels brought into the company; *i.e.*, is half the authorised capital. The remainder will be called up as required. The vessels contributed by the several participants are: (1) By the Navigazione Generale, *Milazzo*, 1916, 11,477 gross tons; *Volturno*, 1916, 11,496 gross tons. (2) By "Italia," *Brasile*, 1916, 4,985 gross tons; *Italia*, 1915, 5,018 gross tons; *Napoli*, 1899, 9,210 tons; *Toscana*, 1900, 4,113 tons. (3) By the Sicula-Americana, *San Giorgio*, 1907, 5,980 tons; *San Giovanni*, 1907, 5,967 tons; *San Guglielmo*, 1911, 8,146 tons. (4) By Peirce Bros., *Dinnamare*, 1900, 4,147 tons; *Masanella* (formerly *Italia*), 1904, 6,366 tons; *Posillepo*, 1912, 5,965 tons; *Sicania*, 1903, 4,381 tons.

A. G. Hugo Stinnes fur Seeschiffahrt u. Uberseehandel.—The latest development of Stinnes' activity is the establishment of a company with £245,000 capital to engage in oversea shipping of every description, and to provide such facilities and accommodation both at home and (particularly) abroad as will further the development of foreign trade. The company will deal principally with the products of mining industries, iron and steel works, agriculture, and the chemical and electrical industries. Warehouses at home and abroad form an important part of the scheme, and the registered scope of the company is so broad as to permit it to take any measures calculated to further its main aims. The chairman of the company is Emil Fr. C. Deters (Hamburg). The founders, who have taken up all the shares, are Walther Fehling (Hamburg), Bruno Richter (Hamburg), Heinrich Vahle (Mulheim), Hermann Struve (Harburg), Wilhelm Bette (Harburg). The first council includes Hugo Stinnes, senr. and Hugo Stinnes, junr. All the persons named are described as merchants.

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"SHIPBUILDING AND SHIPPING RECORD" TABLE OF SHIP SALES.

Name and Type.	Tonnage.	Dimensions. Draught in ( ).	Sold by, to	Builders, hull and year.	Machinery and builders.	Remarks.
Aras, ss. (spar dk.)	3,217 gr. 2,071 net	325′ × 42½′ × 21′ (24′ 3″)	Stephens, Sutton & Stephens, Newcastle, to British Tanker Co., London	Palmers' Co., Newcastle (1893)	24, 40½, 64 × 42 (Palmers' Co.)	—
Kura, ss. (spar dk.)	2,382 gr. 1,521 net	294′ × 37½′ × 20½′ (22′ 5″)	Stephens, Sutton & Stephens, Newcastle, to British Tanker Co., London	Armstrong, Mitchell & Co., Newcastle (1889)	22½, 36½, 60 × 39 (Wallsend Slipway Co., Newcastle)	—
Mira, ss. (spar dk.)	3,700 gr. 2,397 net	345′ × 47′ × 21′ (24′)	Stephens, Sutton & Stephens, Newcastle, to British Tanker Co., London	C. S. Swan & Hunter, Ltd., Newcastle (1901)	25, 42½, 68 × 45 (Blair & Co., Stockton)	—
Rion, ss. (spar dk.)	2,186 gr. 1,419 net	279′ × 37½′ × 19′ (21′ 6″)	Stephens, Sutton & Stephens, Newcastle, to British Tanker Co., London	Palmers' Co., Newcastle (1889)	22, 35, 58 × 39 (Palmers' Co.)	—
Suram, ss. (spar dk.)	3,629 gr. 2,338 net	325′ × 42½′ × 21½′ (24′ 3″)	Stephens, Sutton & Stephens, Newcastle, to British Tanker Co., London	J. Laing, Sunderland (1893)	25⅞, 40, 64 × 42 (G. Clark, Sunderland)	—
Amplegarth, ss. (single dk.) (ex *Denewell*)	3,707 gr. 2,294 net 6,308 d.w.	348½′ × 50½′ × 23½′ (21′ 9″)	Ampleforth S.S. Co., Cardiff, to D. & T. G. Adams, Newcastle	W. Pickersgill & Sons, Sunderland (1910)	24, 40, 66 × 45 (Blair & Co., Stockton)	—
Blackfriargate, ss. (single dk.)	2,790 gr. 1,758 net 4,950 d.w.	331′ × 47½′ × 20′ (19′ 9″)	Gate S.S. Co., Hull, to buyers not stated	Ropner & Son, Stockton (1906)	23, 38, 62½ × 42 (Blair & Co., Stockton)	Price about £80,000.
Bunker Hill, ss.	4,779 gr. 2,575 net	375′ × 52½′ × 31½′	Eastern S.S. Corporation, Boston, Mass., to United States Government	W. Cramp & Sons S.B. & E.B. Co., Philadelphia (1907)	8 Cy. (2) 26, (2) 43, and (4) 51 × 42 (Wm. Cramp & Sons S.B. & E.B. Co.)	Price about £275,000.
Old Colony, ss.	4,779 gr. 2,428 net	375′ × 52½′ × 31½′	Eastern S.S. Corporation, Boston, Mass., to United States Government	W. Cramp & Sons S.B. & E.B. Co., Philadelphia (1907)	3 Steam Turbines (W. Cramp & Sons S.B. & E.B. Co.)	Price about £232,500.
Carl, ss. (pt. awning dk.) (ex *Santos,* ex *Weybridge*)	2,486 gr. 1,610 net	297½′ × 39½′ × 18½′	Dampsk. Aktieselsk. Kalundborg, Kalundborg, to Aktieselsk. Dampsk. Orion, Copenhagen	Sir Raylton Dixon & Co., Middlesbro' (1890)	22, 35, 59 × 39 (J. Dickinson, Sunderland)	Price about 2,400,000 kr.
Hindustan, ss.	4,950 gr. 3,115 net 8,000 d.w.	400′ × 52½′ × 28′	Hindustan S.S. Co., Newcastle, to Prince Line Ltd., Newcastle	Bartram & Sons, Sunderland (1917)	27½, 45, 75 × 48 (J. Dickinson & Sons, Sunderland)	Price about £217,500.
Kirkholm, ss.	4,754 gr. 3,060 net	400′ × 51½′ × 26½′	J. R. Cuthbertson & Co., Glasgow, to buyers not stated	Russell & Co., Pt. Glasgow (1917)	26½, 44, 72 × 48 (D. Rowan & Co., Glasgow)	—
Tay and Tyne, ss. (single dk.)	556 gr. 237 net 520 d.w.	180′ × 26′ × 12½′ (13′ 1″)	Dundee, Perth & London Shipping Co., Dundee, to buyers not stated	Dundee S.B. Co., Dundee (1909)	16½, 27, 44 × 30 (Cooper & Greig, Dundee)	—

FORTHCOMING EVENTS.

INSTITUTE OF MARINE ENGINEERS.—Friday, March 22, Annual meeting, at the Institute, the Minories, Tower Hill, London, E.C., at 6 p.m.

INSTITUTION OF ELECTRICAL ENGINEERS.—Thursday, March 21, meeting at the Institution of Civil Engineers, Great George Street, Westminster, S.W., at 6 p.m. Dr. S. F. Barclay on "The Mechanical Design and Specification of the Turbo-alternator Rotor."

INSTITUTION OF CIVIL ENGINEERS.—Tuesday, March 19, meeting at the Institution, Great George Street, Westminster, at 5.30 p.m. Paper for further discussion on "Modern Developments in Gasworks Construction and Practice," by Mr. Alwyne Meade, Assoc.M.Inst.C.E. Also paper on "The Derwent Valley Waterworks," by Mr. Edward Sandeman, M.Inst.C.E.

LIVERPOOL ENGINEERING SOCIETY.—Wednesday, March 20, meeting at Royal Institution, Colquitt Street, Liverpool. Mr. H. W. Clothier, Assoc.M.Inst.C.E., M.I.E.E., on "Development and Progress of Armour-clad Switchgear."

SHIPPING AND OTHER MEETINGS.

Mar. 16 (*Sat.*)—**Globe Shipping Company, Ltd.** (Annual), Baltic House, Cardiff, at noon.

Mar. 18 (*Mon.*)—**Maritime Insurance Company, Ltd.** (Annual), Liverpool, at 11 a.m.

Mar. 18 (*Mon.*)—**Penrikyber Navigation Colliery Company, Ltd.** (Annual), Cardiff, at 2.30 p.m.

Mar. 19 (*Tues.*)—**Cairn Line of Steamships, Ltd.** (Ordinary), North-Eastern Railway Central Station Hotel, Newcastle-on-Tyne, at noon.

Mar. 20 (*Wed.*)—**Celtic Collieries, Ltd.** (Annual), Great Western Station Hotel, Paddington, London, W., at 2.30 p.m.

Mar. 21 (*Thurs.*)—**Court Line, Ltd.** (General), Winchester House, Old Broad Street, London, E.C., at noon.

SHIPPING SHARE MARKET.

Several causes have operated against activity in the stock and share markets during the past week, the principal being the enthusiastic reception given to the second City visit of the Tank Bank. Apart from the practical suspension of buying in any market induced by the desire of all investors to support the National War Bond rally, there have been other causes making for hesitation of price-movement. The reduction in the dividend of the Court Line from 20 per cent. for 1916 to only 10 per cent. for 1917 was a big blow to the share market, although the directors gave an indication of what might be expected as far back as last July. The price of the shares fell sharply and the weakness affected other shares, such as Cairn Lines, the issue of whose accounts has been postponed owing to difficulties of settlement on Government account. Provincial support has also been lacking for many shares, and there was some selling from Welsh markets owing to the Redcroft and other local shipping companies having refused to make transfer of certain shares. Moor Lines which have been very active for some time past, were sharply marked down to 45 cumulative dividend, which is 10 points below the top figure of last month. The transfer of the fleet to Capel & Co. has fallen through owing to the refusal of the Shipping Controller to sanction the deal. In the shipbuilding section prices have held up well, and iron and steel issues have again been in much demand. Stewarts & Lloyds' dividend caused considerable business in the shares in conjunction with the proposal to issue the remaining capital at prices which will give a good bonus to the shareholders. Steel Company of Scotland shares have passed 16, a rise of 2½ during the past month. Bolckows and Workington iron shares have also been in request on the dividend announcements. There is again some criticism of the new Richardsons-Westgarth reconstruction scheme, but the price of the ordinary and preference shares still holds firmly, and it is expected that the new scheme will go through successfully. Marine insurance shares continue to attract the attention of investors who do not mind some risk and the holding of shares entailing a liability. Some new marine insurance companies have been issuing capital, although the Treasury has not given its consent.

SHIPPING, SHIPBUILDING, ENGINEERING AND MARINE INSURANCE SHARE LIST.

SHIPPING.

Name.	Share and paid.	Extreme quotations, 1917.	Last ann. div. % or per share.	Yield. %	Last Quotation	Rise or Fall.
	£					
African S.S.	20	30½—25½	10	7½	28	
Allan Line ... ... Deb.	100	—	4	4½	92	
Anchor Line ... Cum. pref.	10	9⅝—8¾	5⅝	5⅝	9⅛	
Do. ... ... Deb.	Stk.	105⅛—102¾	4⅛	4⅛	103	
Argentine Nav. ... Cum. pref.	1	25/—14/3	6	5½	23/6	
Do. ... ... Ord.	1	20/6—6/6	Nil.	Nil.	17/6	+ -/6
Australasian Un. S. Nav. Deb.	Stk.	80⅛—79½	4	5	81	
Belfast Steam ... ... "A"	10 (5pd.)	—	5	5	5	
British & Argen. Nav. ... Deb.	Stk.	84—80	4½	5⅛	81	
British India Nav. ... Deb.	Stk.	84—82	4½	5½	81½	
British S.S. Invest. Trust Def.	Stk.	460—344½	50*	11½	427	
Do. ... ... Pref.	Stk.	105⅛—104	6	5¾	102	
Do. ... ... Deb.	Stk.	74½—70	4½	6⅛	72	
Cairn Line ... ... Deb.	Bds.	94—90	5	5½	90½-91	
Do. ... ... Ord.	1	51/6—40/9	20†	8	54/-	—1/6
Clan Line ... ... Ord.	10	55½—26½	25	5½	49	— ⅛
Court Line ... ... Ord.	£1	40/6—29/6	10	5⅛	33/-	—4/9
Cunard SS. ... ... Def.	1	85/—63/9	20*	5	86/9	—1/-
Do. ... ... Cum. pref.	Stk.	97½—82	5	6⅛	86½	
Do. ... ... Deb.	Stk.	100—93½	4½	4½	97½	
Elder Line ... ... Deb.	Stk.	95—89	4½	4½	103	
Elder Dempster ... Cum. pref.	1	19/—17/-	5½	6½	19/-	— -/6
Do. ... ... Deb.	Stk.	89—85	5	5½	82½	
Ellerman Lines ... Pref. Ord.	10	9½—8⅜	6¾	6¼	9⅛	+ 1/16
Do. ... Guar. pref.	10	9—8½	4½	5⅓	8⅜	+ 1/16
France Fenwick ... Cum. pref.	5	95/3—85/-	5½	6⅛	87/6	
Furness, Withy ... ... Ord.	1	60/9—41/6	20*	6⅛	66/-	—1/6
Do. ... Cum. pref.	10	9—7⅜	5	5⅓	8⅞	— ⅛
General Steam Nav. ... Ord.	1	24/9—21/6	10	7⅓	29/9	+1/3
Do. ... ... Pref.	1	19/4½—15/-	5	6⅓	15/3	
Houlder Line ... Cum. pref.	5	82/6—75/-	5½	6⅓	80/-	+1/3
Do. ... ... Deb.	Stk.	—	4½	4½	91	
Houlder Bros. ... Cum. pref.	5	—	5½	6½	4	
Do. ... ... Deb.	Stk.	—	4½	5½	82	
India Gen. Nav. & Rly. ... Ord.	10	11⅜—8⅞	6	5⅜	11½	
Indo-China N. ... Pref. Ord.	5	97/6—87/6	6	6⅛	97/6	
Irrawaddy Flotilla	40	—	15	5	120	
Khedivial Mail ... ... Ord.	1	40/—24/-	20	12½	38/6	— -/9
Do. ... ... Pref.	5	7⅝/3—7/0/-	5½	7⅛	77/6	+5/-
Do. ... ... Deb.	Stk.	95⅜—90	4½	4¾	94	
King Line ... ... Ord.	1	42/6—31/6	16*	6⅛	49/6	— -/4½
Lamport & Holt ... Cum. pref.	£1	20/4½—18/-	6	6	19/6	+ -/6
Leyland (F.) ... Cum. pref.	10	8⅛—7½	5	5⅜	8⅛	+ ⅛
Mercantile SS. ... ... Ord.	5	30⅛—15	40	8	30⅜	
Do. ... ... Pref.	1	21/—15/9	5	6⅛	21/-	
Moor Line ... ... Ord.	10	35—20	30	6⅜	45	—10
Nelson Steam Nav. ... Deb.	100	—	5	5⅛	98½	
New Zealand ... ... Ord.	£10	—	8	2½	32½	
Do. ... ... Deb.	Stk.	87⅛—86⅝	4	4⅝	88½	
Nitrate Producers SS. ... Ord.	5	25⅜—20	30	6⅛	24½	
Do. ... Cum. pref.	5	100/—80/-	5	5	5	
Oceanic Steam. Nav. ... Deb.	100	98⅛—84	4½	4⅝	94xd	
Orient.Stm.Nav.Co. Cum. pref.	10	9⅝—8⅜	5	5⅛	9⅜	+ ⅛
Do. ... ... Deb.	100	92—88	4½	5⅛	88	
P. & O. S. N. ... Cum. pref.	100	93½—84	5	5⅜	92½	+ ⅜
Do. ... ... Def.	100	342—295	18	5⅜	333	—5
Do. ... ... Deb.	Stk.	65½—63⅛	3½	5⅛	64	
Prince Line	1	6⅜—3¼	30	5⅛	115/-	—3/-
R.M.S.P. ... ... Ord.	100	125—109½	7	5⅛	123	+ ⅜
Do. ... ... Pref.	Stk.	85⅜—83½	5	6	83½	
Do. ... ... Deb.	Stk.	86—79	4½	5⅜	79½	
Shaw, Savill & Alb. Cum. pref.	5	8⅞—8 0 -	5½	5⅜	85/-	
Shell Transport ... ... Ord.	1	6½—98/3	35	6⅛	5⅜	
Do. ... Cum. pref.	10	9½—9⅛	5	5⅜	9⅛	
Sutherland SS. Co.	£1	75/—50/9	30	5⅛	105/-	—2/9
Union-Castle SS. ... Cum. pref.	10	7⅞—7⅛	4½	6	7 1/16	
Do. ... ... Deb.	Stk.	90—86	4	4½	89	
West Hartlepool ... ... Pref.	10	7⅞—7⅛	5½	6⅛	8 1/16	

INSURANCE.

Alliance	20 (2/4 pd.)	10½—9	12/-	7	9⅛	
London Assurance	25 (12½ pd.)	60¾—45¾	20	6	62½	
Merchants' Marine Insurance ...	10 (2½ pd.)	10½—6¾	10	6	10⅜	
N. British & Mercantile ... rd.	25 (6¼ pd.)	26—29	40/-	6⅛	34½	
Phœnix Assurance	10 (1 pd.)	7⅛—8	40	7	8	— 1/16
Royal Exchange Assurance ...	Stk.	241½—187	10	4½	249½	
Sea Insurance	10 (2 pd.)	27½—24¼	10	6	27	
World Marine, Limited ...	5 (2 pd.)	6¼—55/-	5	4½	6	

IRON AND STEEL.

Name.	Share and paid.	Extreme quotations, 1917.	Last ann. div. % or per share.	Yield. %	Last Quotation	Rise or Fall.
	£					
Babcock & Wilcox... ... Ord.	1	68/—52/6	15	4½	70/3	+2/-
Baldwins ... ... Cum. pref.	1	20/—15/-	5½	5⅜	20/-	
Do. ... ... Deb.	Stk.	84—82	4½	5⅜	84	
Bayliss, Jones ... Cum. pref.	1	—	5	7½	1 1/16	
Bell Bros. ... ... Cum. pref.	10	10—9½	6	6	10	
Do. ... ... Deb.	Stk.	80—73½	5	6⅞	74	
Bessemer (Henry) ... Ord.	1	34/6—24/6	12½	7⅛	33/-	— -/6
Bolckow Vaughan ... Ord.	1	30/—22/2	11	7½	29/6	
Do. ... ... Cum. pref.	20	17⅛—16½	5	5⅜	16/9	
Cargo Fleet Iron ... ... Ord.	1	24/9—17/3	3	2⅜	26/-	— -/4½
Do. ... ... Deb.	100	84—81½	4½	5⅜	82	
Consett Iron Co. ... ... Ord.	1	36/3-24/10½	50	10	92/6	+2/6
Dominion Iron & Steel ...	Bds.	88½—71⅜	5	7	71	
Dorman, Long ... ... Ord.	1	50/—30/9	8†	—	38/6	— -/6
Do. ... ... Deb.	Stk.	—	4	5½	71	
Ebbw Vale Steel & Iron Ord.	1	30/6—24/6	12½	9	28/6	+ -/3
Guest, Keen & Nettefids Ord.	1	89/—62/6	15*	3½	86/3	—1/3
Do. ... ... Cum. pref.	5	5⅛—5	5	4⅜	5⅛	
Do. ... ... Deb.	Stk.	79⅜—73½	4	5⅛	77	
Hadfield's Steel Foundry Ord.	1	107/6—78/6	30	5½	117/6	+11/-
Ibbotson Bros.	5 (4 pd.)	7—6¼	7½	4½	6⅞	
Jessop (W.) & Sons ... Ord.	5 (4 pd.)	10—8	15*	6	9⅛	— ⅜
Lanarkshire Steel Cum. pref.	10	—	5	7½	7	
Lysaght (J.) ... Cum. pref.	1	25/—20/-	6	6	20/-	
Do. ... ... 2nd pref.	1	19/9—19/4½	6	6	20/-	
Manganese Bronze ... Ord.	1	—	6	11	1 1/16	
Do. ... ... Cum. pref.	1	—	6	8	⅜	
North-Eastern Steel ... Deb.	Stk.	—	4½	—	—	
Palmers Ship & Iron "A" ...	1	13/—9/9	Nil.	Nil.	13/9	
Scott (Walter) ... ... Ord.	1	29/4½-21/3	15	10⅜	29/-	
Do. ... ... Pref.	1	19/9—16/-	6	7½	19/9	
Sheffield Forge ... ... Ord.	1	—	15	4½	65/6	— 1/6
Shelton Iron & Steel ... Ord.	1	24/6-16/10½	7½	6	22/9	
Do ... ... Deb.	100	91⅛—91	5	5⅜	91⅜	
S. Durham Steel & Iron ... Ord.	1	42/9—29/6	10	4⅔	43/-	+ -/10½
Do. ... ... Cum. pref.	1	20/9-18/7½	6	6½	20/9	+ -/9
Do. ... ... Deb.	Stk.	81—80	4½	5⅝	80	
Steel Co. of Scotland ... Ord.	10	—	10	6½	16	+2½
Stewarts & Lloyds ... Pref. ord.	10	17—16	10	6⅔	16	
Do. ... ... Cum. pref.	10	—	6	4⅜	13½	
Stone (J.) ... ... Cum. pref.	10	8⅜—7⅛	5	6⅛	7 1/16	
United States Steel ... Ord.	100$	124—109⅜	8	7⅜	109⅛	
Do. ... ... Cum. pref.	100$	—	7	6	114½	
Vickers Ltd. ... ... Ord.	1	44/6—35/3	12½	5½	45/-	+ -/9
Do. ... ... Pref.	Stk.	84—81	5	6	82	
Do. ... ... Deb.	Stk.	79—74⅜	4	5⅜	76	
Weardale Steel ... Cum. pref.	1	32/3—23/-	19½	13⅜	28/9	
Do. ... ... Cum. pref.	1	25/3—18/9	6	5⅞	25/-	
Do. ... ... Deb.	Stk.	—	4	6⅛	62	
Workington Iron & Steel Ord.	1	30/3—21/-	10	6⅛	29/-	+ -/6

SHIPBUILDING AND MARINE ENGINEERING.

Armstrong, Whitworth Ord.	1	45/—36/-	12½	5⅜	42/-	— -/6
Do. ... ... Cum. pref.	5	7⅜/9—6⅞/-	4	5⅝	6⅞	
Do. ... ... Deb.	Stk.	78—73	5	6⅜	75½	
Beardmore (W.) ... ... Deb.	100	93—88	4½	5	90	
Brown (John) ... ... Ord.	1 (15s. pd.)	29/—22/9	12½	7	28/3	+ -/1½
Do. ... ... Cum. pref.	10	8⅝—7⅜	5	6⅜	8⅛	
Cammell Laird ... ... Ord.	5	7⅛—6⅜	10	7⅛	6 1/16	
Do. ... ... Cum. pref.	5	8⅝/6—7⅜/6	5	6½	83/6	
Do. ... ... Deb.	100	83⅛—79⅜	4½	5⅜	84	
Dunlop (Jas.) ... ... Ord.	1	28/9—16/-	10	9⅛	22/3xd	
Do. ... ... Cum. pref.	1	18/9—16/6	6	7⅛	17/6	
Fairfield Shipbldg ... Cum. pref.	10	8⅛—8⅛	10	7⅛	8⅛	
Fleming & Ferguson ... Ord.	10	—	10	7⅛	14⅜	
Gray (Wm.) ... ... Deb.	100	100—95⅜	4½	4⅞	97⅛	—2⅛
Hawthorn (R. & W.) Leslie Ord.	10	25⅜—15⅜	12½	5	29	
Henderson (D. & W.) Cum. pref.	1	—	5	9	9/16	
Richardsons Westgarth Ord.	1	10/3 —5/-	Nil.	Nil.	8/9	+ -/9
Do. ... ... Cum. pref.	1	19/9—12/6	Nil.	Nil.	17/6	
Do. ... ... Deb.	Stk.	67—62	4½	6⅝	66	
Simons (W.) ... ... Cum. pref.	10	—	5	5	9⅛	
Swan, Hunter & W. R. ... Ord.	1	51/—33/6	12½	5⅜	55/-xd	+ -/9
Do. ... ... Cum. pref.	1	17/3—17/-	5	5⅜	17/-	
Do. ... ... Deb.	Stk.	78—77	4½	5⅜	77	
Thorneycroft (John I.) ... Ord.	1	45/—16/-	17½	8⅛	41/-	— -/6
Do. ... ... Cum. pref.	1	19/—16/-	6	6⅜	18/6	
Do. ... ... Deb.	100	—	5	6⅛	82	
Wallsend Slipway ... ... Ord.	1	2—1⅛	10	2½	72/6xd	+7/6
Do. ... ... Cum. pref.	1	1—1	5	5	1	

* Including bonus. † Also 20 % in shares. ‡ Treasury price.

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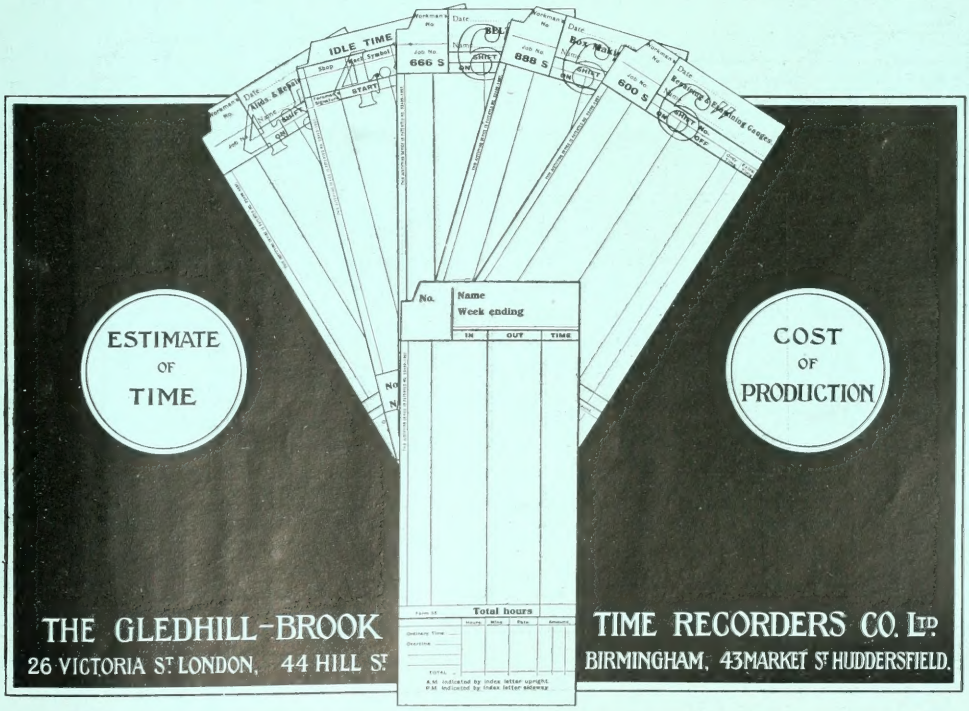

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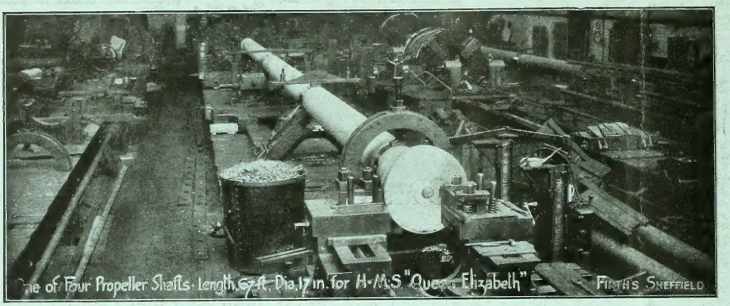

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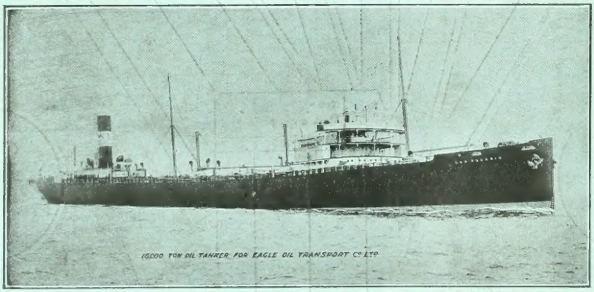

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